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THE AMERICAN PRACTITIONER.

MARCH, 1878.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

RÉSUMÉ OF THE TREATMENT OF GONORRHŒAL EPIDIDYMITIS.

BY F. J. BUMSTEAD, M. D.

Late Professor of Venereal Diseases at the College of Physicians and Surgeons, New York.

The remedies proposed for the relief of gonorrhœal epididymitis are legion in number, too numerous, indeed, even to be recorded in full in these pages. Some idea of their diversity may be obtained by consulting the columns of the Lancet for 1876, when they were called out by a discussion upon the value of puncture of the testicle for this affection. It may be said, in general, that the means now adopted are much less severe and heroic than a few years ago, and, we have reason to believe, are attended with better results. I propose, first, to give briefly my own plan of treatment, and then enumerate a few of the others which have been recommended.

Upon the slightest indication of an attack of swelled testicle, absolute rest in the recumbent posture should be enjoined. The bed is the only place for the patient, since lying dressed

upon the lounge will not remove the constriction exercised by the clothes, nor permit of appropriate local applications. The scrotal organs must also be well supported, and this is better done by a handkerchief sling, or by a broad strip of adhesive plaster passed under the scrotum and made to adhere to the thighs, than by a suspensory bandage as found in the shops. It is well to unload the bowels by a free cathartic, as three compound cathartic pills or a bottle of citrate of magnesia. The nauseants and emetics formerly employed are now generally abandoned, except perhaps with plethoric subjects, or in cases of general febrile disturbance; and even then the exhibition of aconite may well be substituted. An opiate may be required at night to secure sleep. The diet should, of course, be restricted. Meanwhile the patient has enough to attend to without bothering with the antiblennorrhagics and injections which he may have been using for the cure of his urethritis.

As to local applications, relief will often be experienced by keeping the part covered with a single thickness of linen constantly wet with a solution of the muriate of ammonia, half an ounce to a pint of water. Better still, especially at night, is to smear the scrotum freely with the following mixture:

℞ Ext. belladonnæ, ... ʒ ij
Glycerinæ, ... ʒ ss
Aquæ, ... ʒ j. M.

And cover it with a piece of lint moistened in the same. The old-fashioned lead and opium wash may likewise be of service. I have also used with very good effect, in some instances, a simple procedure recommended by Dr. Edwin Lloyd, of Worksop, Notts county, England. The testicle is first immersed in water as hot as can be borne, and kept in it from ten to fifteen minutes, immediately to be followed by a stream of cold water poured over it from a height for five minutes. This should be repeated two or three times a day.

Under these measures the epididymitis may subside, but, probably in the majority of cases, the tunica vaginalis becomes involved, and more or less fluid may be detected in

this sac. And here, in our experience, comes in the golden opportunity of giving almost instantaneous relief, and cutting off the further progress of the disease. The means we refer to consists in the multiple punctures of the scrotum so highly recommended by Velpeau. In performing this slight operation, the tumor is rendered tense by grasping it posteriorly with the left hand, as in making the puncture for hydrocele. With the right hand the surgeon, holding the blade of a common lancet between his thumb and forefinger, at the distance of about one-half an inch from its point, makes from four to six rapid plunges into the tense surface of the scrotum, still retaining his hold with the left hand so as to preserve the parallelism of the incisions in the skin and serous membrane. If there be much fluid in the sac, it will spirt out to some distance; in other instances, only a few drops of serum, mixed with a little blood, escape. In either case, the relief to the sufferings of the patient is most marked, and the further progress of the disease is at once arrested. The pain produced by this operation is so slight as not to *require* an anæsthetic; but if the patient be timid, I usually give him a few whiffs of ether, or let him inhale the nitrous oxide gas, which is now put up in a condensed form in small cylinders, and is kept on hand by most surgeons for this and like minor operations. So great is my confidence in the effect of these incisions, that I do not hesitate to tell a patient that if he will submit to them he can be on his feet again in two or three days. I have never seen the slightest ill effect from them, although Montanier* reports a case in which a simple incision into the tunica vaginalis was followed by excessive hemorrhage very difficult to control, and which even endangered life. Probably some scrotal artery of considerable size was wounded, but this must be a very rare occurrence.

We proceed now to mention other modes of treatment recommended.

Sedatives.—These enter, to a greater or less extent, into many of the plans of treatment proposed, but they constitute

* Gaz. des Hôpitaux, 1858, p. 106.

the basis of all treatment as recommended by that accurate observer, Mr. J. L. Milton, and some others. Mr. Milton* says:—"The surgeon's first object is to arrest the *pain; with this the inflammation stops.*" † For this purpose he prefers morphia in doses of a quarter to half a grain two or three times a day, and in very severe cases gives three-quarters of a grain once or twice in succession. In the way of external applications, Mr. Milton recommends the following lotion:

℞. Liq. ammon. acetatis, ... ℥ j
Spir. ætheris, ... ℥ iss
Mist. camphor., ... ℥ iiiss.

M. et sig. To be applied by means of a single fold of linen, which is to be kept continuously wet with the fluid.

I have never myself tried the effects of opiates alone.

The application of the oleate of mercury with morphia is suggested by Prof. Marshall, in the Lancet of May 25, 1872.

Dr. Ed. Warren, late chief surgeon of the Egyptian army, injects beneath the tunica vaginalis, by means of a hypodermic syringe, from one-sixth to one-quarter of a grain of morphia; then straps the testicle firmly with adhesive plaster, and administers internally twenty grains of the bromide of potassium, with fifteen drops of the tincture of gelsemium sempervirens and a drachm of the fluid extract of ergot, in half an ounce of cinnamon water, every third hour. The injection of morphia is to be repeated at intervals of eight hours, if necessary, until a grain has been administered. Relief is promised in twenty-four hours; if it fail to occur, discontinue the injections and apply a narrow blister on either thigh, directly over the femoral vessels. (London Lancet.)

Pulsatilla.—Drs. Piffard and Fox, of New York, have confidence in this drug, much used by the homœopathists in the treatment of epididymitis. On inquiry, I learn that they give a single drop of the "mother tincture" every one or two hours, and they state that the pain is speedily removed.‡

* Pathology and Treatment of Gonorrhœa, fourth edition, p. 221.

† The italics are in the original.

‡ See Medical Record of January 12, 1878, p. 39.

Blood-letting.—Venesection in epididymitis is, of course, a thing of the past. The application of leeches to the scrotum has also been well nigh abandoned. They may be called for, however, when the inflammation wholly or chiefly involves the cord, and should then be placed directly over the external abdominal ring.

Ice.—The application of ice has been recommended by several authorities, and especially by M. Diday;* but, according to this author, in order to be successful, it must be done with true French precision. The following are his directions: Two hogs' bladders are to be soaked for a few minutes, in order to soften them and make them pliant. Introduce into each, through their openings, enlarged by a stroke of the scissors, four or five pieces of ice as large as a goose's egg. Before tying the necks of the bladders, thoroughly expel the air from them, so that they will the better adapt themselves to the surfaces to which they are to be applied.

The scrotum should, of course, be elevated by a sling bandage or otherwise. Beneath it is to be placed one of these bladders filled with ice, at the same time protecting the thighs and perineum from the "impression of cold" by the interposition of napkins. The second bladder naturally goes on top, and is to be extended as far as the inguinal ring.

To enter farther into the details given by M. Diday seems unnecessary, since they are such as will suggest themselves to any one with common sense, unless it is important to mention that "the ice should be renewed when melted!"

According to M. Diday, the ice should remain on constantly, night and day, for at least eighteen hours, but in the majority of cases the application for forty-eight consecutive hours is required. After its removal we are to taper off with the application of cold wet cloths, lest the return to the natural heat of these parts should cause too great a shock! This method, it is stated, will supersede all others, even in the most desperate cases of swelled testicle.

Judging from our personal experience, or rather from our

* Annales de Derm. et de la Syph., 1869.

personal observation, the use of cold applications, and especially of ice, in the manner recommended by our highly respected friend, M. Diday, will be found to be of value in some cases of gonorrhœal epididymitis, especially at the outset of the attack; but they will prove, in the majority of instances, insufficient. One rule as to their continuance is enough: if they do not afford relief within two hours, leave them off and seek other means.

Poultices.—If cold fails, then heat may be tried in the form of hot poultices—an old-fashioned mode of treatment, to be sure, but one which is doubtless of service in some cases when the patient is unwilling to submit to puncture of the tunica vaginalis. In these poultices, tobacco found a legitimate use. An ounce or so of "fine cut" was to be mixed in half a pint of hot water, which was brought to the boiling point, while stirring the mixture and adding gradually ground flaxseed or ground elm-bark, so as to give it the proper consistency. The poultice should be large enough to envelop the whole testicle; its surface be covered by a layer of thin muslin upon which laudanum may be sprinkled, and a piece of oil-silk applied over the outer surface to protect the bed-clothes. Poultices of tansy, hyoscyamus and belladonna, have also been recommended; while Besnier (*Bull. Gén. de Thérapeutique*, Feb. 1870,) advises that the scrotum, carefully elevated, should be continuously enveloped by compresses saturated in a concentrated infusion of the leaves of digitalis, applied either hot or cold as may be pleasant to the patient.

Strapping the testicle.—This procedure is much less used now than formerly. It was first suggested by Dr. Fricke,* of Hamburg, and is sometimes called by his name. It is only applicable after the swelling has been reduced, the pain dissipated, and when the parts will bear gentle handling. When an indolent swelling remains and absorption is tardy, I not unfrequently resort to it. The rubber adhesive plaster, or the

* Dr. Fricke's paper was published in the Zeitschrift für die gesammte Medicin. B. j. h. 1, Hamburg, 1836. A translation of it appeared in the British and Foreign Medical Review, Vol. I, 1836, p. 253.

mercurial plaster prepared by Seabury and Johnson, of New York, is far more cleanly than the ordinary adhesive plaster; or, when a sedative effect is also desired, we may employ a mixture of two parts of adhesive plaster with one of extract of belladonna, spread upon thin leather.

Before applying the plaster, the hair should be carefully removed from the scrotum with a razor or scissors. The plaster is to be cut into strips about three-quarters of an inch in width. The testicle is now to be pressed down to the lower portion of the sac, and held there by the thumb and forefinger of the left hand, while a strip is placed firmly round the affected side of the scrotum, just below the abdominal ring. Successive strips are added, each one overlapping the preceding for one-third its width, and care being taken that they all fit smoothly, until all but the bottom of the testicle is enveloped; the latter should then be covered with strips applied longitudinally, like the bottom of a wicker basket, and finally the whole is to be secured by a long narrow strip carried circularly several times around the tumor. In the course of from twelve to twenty-four hours, the plaster will be found to be loosened by the decrease of the swelling, when it should be removed and fresh strips applied. The compression should be continued until the testis has nearly returned to its normal dimensions, and in the meantime the parts still be supported by a bandage. Cullerier states that strapping the testicle has been entirely abandoned in France.

Prof. Thiry, of Brussels, the most eminent syphilographer of Belgium, has been publishing a long series of lectures on gonorrhœal epididymitis in the *Presse Médicale Belge*, 1876-7, in which he strongly advocates the well nigh abandoned strapping. He claims that it has fallen into disuse, chiefly because it has been reserved for the stage of decline after the inflammatory symptoms have subsided, while, in his opinion, the time for its application is the "*période de stade*," *i. e.*, when the inflammation has fully reached its height. When called to a case, he first ascertains if the general febrile disturbance has subsided, and any trouble in the digestive organs has dis-

appeared. If not, he gives an emetic, "which soon makes that all right," and proceeds at once to strapping. He, however, rejects all plasters for this purpose, and uses only narrow strips of muslin which are made to envelop the testicle in six to eight layers. The mode of application is about the same as that in general use, except that each strip when applied is finally to be brought back to the strip encircling the neck of the scrotum. The whole is retained in place by spreading starch-paste on the last two layers applied.

Antimonial frictions.—This method was introduced in Strasbourg, by M. Michel, in 1865. It consists in making minute punctures along the cord from the scrotum to the external abdominal ring, and then repeatedly rubbing in an antimonial ointment (*pommade d'Autenrieth*),* until pustules appear, the coalescence of which, however, should be avoided, lest ugly cicatrices result. The pain is said to cease in forty-eight hours, and a cure to be effected toward the end of thirty days. I think we can beat that! (*Lyon Médical*, from *Sud. Médicale*, Nos. I and II, 1870.)

Lotions of nitrate of silver.—Dr. Marc Girard applies to the affected testicle lint soaked in a solution of nitrate of silver, one part to one hundred of water. In five cases treated in this way, at the military hospital of Gand, the pain ceased in about twenty-four hours, and the average length of treatment was six days. The mode of action of the remedy is unknown; it is not by revulsion, since it does not cause any pain but merely a pleasant sensation of heat, and it does no more to the skin than slightly discolor it. (*Archiv. Méd. des Belges*, August, 1870.)

Collodion and ether.—The application of collodion to the scrotum as a means of compression, suggested by M. Bonnafont, was a subject of discussion before the Academy of Medicine in Paris, in 1854, and a trial was made of it by Ricord and others, who reported against it. Dr. Assadorian† recom-

* ℞ Antimonii et potassii tartratis, . . . one part.
Axungiæ benzoatæ, ... three parts. M.

† American Journal of Syphilography and Dermatology, Vol. I, p. 216.

mends the local application of sulphuric ether, a piece of lint kept constantly wet with this fluid being laid over the inflamed testicle and cord, and the bed-clothes being elevated by a hoop, so as to favor free evaporation.

Punctures.—I have already spoken of the multiple punctures proposed by Velpeau, and expressed my confidence in them for the relief of swelled testicle, no matter how small the quantity of fluid contained within the tunica vaginalis. This procedure, which is also highly recommended by Cullerier, is, I believe, sufficient for the relief of all cases, without resort to any deeper incision.

The late M. Vidal (de Cassis) revived an operation which is said to have originated with a French surgeon by the name of Petit, who published a work on venereal in 1812. This operation is simply an extension into the substance of the testicle of the incisions recommended by Velpeau. Vidal states that he first employed these incisions in swelled testicle when the body of the testicle was involved, to which form of the disease he gives the name of parenchymatous orchitis. His design was, by dividing the tunica albuginea to relieve the constriction exercised by this fibrous tunic upon its inflamed contents. Finding, as he says, that the operation was unattended by any unpleasant result, and that it relieved the pain and hastened resolution, he extended it to the more frequent cases in which the epididymis is alone attacked, and found the effect equally favorable. In his work on venereal, this author states that he has performed this operation with impunity in four hundred cases, and claims for it preference to all other modes of treatment. His directions as to the manner of performing it, are to incise the tunica albuginea with a bistoury or lancet passed through the scrotum and tunica vaginalis, to the extent of six-tenths of an inch (*un centimètre et demi*), and to penetrate the parenchyma of the testicle to the depth of less than three-tenths of an inch (*de moins de moitié*). Only one puncture of this kind is to be made. In spite of M. Vidal's testimony in its favor, we can hardly believe this operation entirely devoid of danger, espe-

cially since the report of four cases observed by a single surgeon, M. Demarquay, in which the substance of the testicle gradually oozed from the incision in filaments, and in three of which the testicle was totally lost.* Diday also reports two cases in which atrophy of the testicle followed Vidal's incision. (*Annales de Derm. et de la Syph.*, 1869.) If resorted to at all, it should probably be reserved for those cases in which it was first used, viz., where the body of the testicle is extensively implicated.

Mr. Henry Smith,† surgeon to King's College Hospital, London, has advocated the same treatment by incision into the body of the testicle, and states that he has met "with results which have astonished himself and his numerous pupils." Mr. Smith's recommendation has excited a lively discussion in some of the London medical journals.

Numerous other topical remedies have been recommended in gonorrhœal epididymitis, but many of them are not worthy of mention. Inunctions of mercurial ointment upon the scrotum may relieve the pain, but are liable to cause salivation. They may be used with caution in those cases in which the acute symptoms have subsided, leaving chronic engorgement of the epididymis.

Furneaux Jordan‡ treats epididymitis by the application to the affected side of the scrotum of a solution of nitrate of silver (℥ij ad aquæ ℥i), followed by gentle pressure.

Prof. W. Boeck, of Christiana, speaks highly of a curious mode of treatment, viz., the injection of a few drops of a solution of nitrate of silver into the prostatic urethra, and states that the pain and swelling are thus relieved in twenty-four hours, provided they are not dependent upon effusion into the tunica vagina vaginalis. (Oral Com.)

Dr. L. D. Waterman, of Indianapolis, reports§ a plan of

* British and Foreign Medico-Chirurgical Review, American edition, April, 1859, from the Bulletin de Thérapeutique, tome lv., p. 549.

† London Lancet, 1864.

‡ British Medical Journal, as quoted in New York Journal of Medicine, October, 1869, p. 63.

§ The Practitioner, November, 1876, p. 334.

treatment which he states has been eminently successful in his hands and others. He administers internally acetate of potassa with acetate of morphia, the latter so graduated as to secure full, but not excessive, anodyne effects. Locally, he employs a liniment composed of

Tinct. iodinii,	Tinct. opii,
Aq. ammoniæ,	Ol. olivæ. M.

The proportions of the iodine and ammonia are so graduated that, when a woolen cloth, saturated hourly with the liniment, is kept constantly applied to the scrotum, the effect will be bearable and only cause half blistering of the skin or exfoliation, with a stinging sensation for a short time after application. The pain is said to cease, sometimes in three hours, always within twenty-four, and the effusion to be rapidly absorbed without tapping.

Iodoform.—Dr. Julian Alvarez,* of Palma, Majorca, reports four cases of epididymitis, successfully treated by the application of iodoform ointment. He claims that this agent calms the pain in the course of one or two hours; that it exercises a very marked resolvent action, and materially shortens the duration of the disease. He uses, according to the intensity of the inflammation, an ointment containing one to two grammes of iodoform to the ounce of lard.

The induration of the epididymis, which is usually left behind after the subsidence of the acute symptoms of an attack of swelled testicle, will sometimes disappear spontaneously. If it is inclined to persist, however, the earlier it is attacked the better, for the chances of success are certainly superior while the plastic material is not yet fully organized. If the indurated epididymis is still abnormally sensitive to pressure, the application of a few leeches over the cord, repeated several times at intervals of a few days, will be found of service. A small quantity of mercurial ointment should be rubbed into the scrotum morning and night, and the genital organs should be well supported by a suspensory bandage.

Another local application worthy of trial is the iodide of

* La Independencia Medica, June 1, 1877.

lead ointment, or an ointment of iodoform, one scruple to half an ounce of lard, the strength of which may be increased: the latter especially has proved of service in our hands. The application should be made directly over the indurated mass. Much is to be expected also from the internal administration of iodide of potassium, which is so powerful an agent in resolving inflammatory products generally.

It is impossible to say how old an induration of the epididymis can be treated with hopes of success. M. Gosselin's cases show that it may disappear after existing for several months, and it is not improbable that a cure may be effected after a much longer period. Where the epididymis on both sides is affected, the attempt should certainly be made, especially if the patient is young and intends to marry. It is a serious question whether the surgeon should inform him of the impotency which his disease may entail, since the effect upon his mind might possibly be most disastrous.

NEW YORK CITY.

PULMONARY CONSUMPTION.*

BY GHISLANI DURANT, M. D., PH. D.

Member of the American Medical Association, Member of the Medical Society of the County of New York, Fellow of the New York Academy of Medicine, Etc.

VARIETIES OF PHTHISIS.

In order that tubercle may be developed, a certain depraved condition of the system is necessary. This state may be produced by an actual existent malady of short duration, or by a long continued illness which has greatly lowered the vital powers, or by an inherited tendency to the disease.

Pulmonary phthisis, then, is divisible into three forms or classes—first, essential; second, acquired; third, accidental.

* Continued from February No., p. 85.

Essential phthisis is the result of an inherited disposition or diathesis, which, though hastened in its development by external causes, may and generally does develop independently of them. The internal causes upon which it depends are the natural degeneration of families, or the tendency of constitutional maladies to so influence the normal development that in time retrograde metamorphosis, ending in that last manifestation of an exhausted plasmatic form (tubercles), are produced.

By *acquired phthisis* we understand that under the prolonged influence of external conditions, such as mental depression, want of proper nourishment, close confinement, excessive labor, want of pure air, deprivation of light, etc., there may be induced an artificial tuberculosis, a diathesis, which will give rise to a very common form of phthisis.

In *accidental phthisis*, some external influence or agent, sometimes mechanical, has suddenly so impressed itself upon the economy that retrograde metamorphosis of plasmatic tissue immediately results, and the pulmonary inflammation produces, instead of pus, a pyoid caseiform substance, very destructive to plasmatic material, out of which this neoplasm—imperfect tubercle—is formed, soon producing about itself the true or granular tubercle.

These three forms of phthisis, though dissimilar, not to say distinct from each other at the beginning, later on resemble each other so closely, that they present the same symptoms and run the same course. For clinical purposes we note their differences, and group them accordingly; but in the interest both of pathology and therapeutics, we must regard them as only varieties of one disease—*pulmonary consumption.*

ESSENTIAL PHTHISIS.

Essential phthisis is a constitutional and organic pathological condition (*misére physiologique* of Bouchardat), in which the plastic tissues, instead of being reproduced, have a tendency to change into miserable neoplasms, in which neither life,

organization, nor a trace of circulation, exists. This is the phthisis of the ancients, the decline, called also pulmonary consumption when the tubercles, the characteristic of this affection, occupy their most common seat, the lungs.

Until quite recently, the doctrine of the hereditary nature of tubercle was almost universally believed. However, when we study the complex phenomena, and examine carefully the contradictory opinions which have been expressed concerning this influence, we gradually lose faith in its correctness, and finally doubt its influence. Even if we were to admit the truth of the dogma of hereditary transmission, statistics would contradict us; for of three hundred and seventy-four cases occurring in old women at the Salpétrière Hospital, reported by Piorry,* seventy-eight died without presenting any trace of tubercle, although their parents died from that disease. So Mr. Scott Alison,† physician to the Brompton Hospital, an establishment entirely devoted to the treatment of pulmonary phthisis, states that, out of six hundred and three cases, he has only seen the influence manifested in nineteen cases. We can not look upon pulmonary phthisis as hereditary, and we are supported in this view by the observation of Pidoux,‡ that there is not more than twenty-five per cent. of those born of phthisical parents who themselves become phthisical. In one thousand cases, Dr. Williams,§ of London, says that the purely hereditary percentage was only twelve.

It is not tuberculosis that causes the offspring to inherit pulmonary phthisis. It is the influence which that malady exerts upon the constitution of the parent to weaken it, and, through the parent, the constitution of the child. It is this weakness, this want of power to resist disease, and not the direct transmission of the tubercle itself, that so often aids in its development in the offspring of tuberculous parents. Very

* Pathologie Iatrique et Médicale, 1841 1851; and Clinique Médicale de l'Hôpital de la Pitié et de l'Hospice de la Salpétrière.

† Transactions of Medico-Chirurgical Society of Edinburgh, 1824.

‡ In Etud. Gen. et Prat., 1873, p. 97, the author says twenty per cent. In a paper read before Société Hydrologie, 1864, twenty-five per cent.

§ Pulmonary Consumption, London, 1871, p. 115.

often this weakness of the offspring is due to other disease; and in these vitiated constitutions, from whatever cause arising, we always find a less power of resisting the encroachment of disease. (Niemeyer.*)

All practitioners have observed the fact that individuals are often found who, notwithstanding they are the offspring of parents in whom tuberculosis was well marked, throughout a long life never exhibited any symptoms of the disease; and, on the other hand, individual members of a family, without suffering any undue hardship or exposure, and without any appreciable cause, have become the victims of this malady.

In truth, it seems as if each being had his own individuality in regard to health and disease. He may inherit dispositions from one or both parents or from remote ancestors, or he may be so original as to differ entirely from his parents, and possess an entirely new predisposition; thus he may inherit disease, or he may develop it *de novo*.

"To-day we can affirm, without fear of denial," says Devay,† "that it is to hereditary transmission that is due, in a great measure, the fatal propagation of this disease — tuberculosis; but, far from admitting, with certain authors, that parents transmit to their children an organic predisposition, which must, at a certain time of life, necessarily give rise to the development of tubercles, we think that phthisis is hereditary only in so far that the tuberculous parent may transmit to his offspring an organization which is more prone to be influenced by the causes which give rise to tubercle than another." We believe that this view is the only logical one, and that the theory of direct transmission is not only in opposition to reason, but to the results of clinical observation.

What are we to understand by hereditary transmission? Do the offspring of persons suffering from phthisis inherit the disease itself, or do they have impressed upon the organism a predisposition to be influenced by all causes which would produce the disease? If disease can be transmitted directly, it

* Text-Book of Practical Medicine, Vol. I, p. 213.

† Du Danger des Marriages Consanguins, 1857.

is necessary that the germ of the disease be transmitted at the same time as the germ of life itself. This germ must be the agent producing the disease, if phthisis is transmitted as syphilis is; for the child born of syphilitic parents is impregnated with the virus from the beginning; he is born syphilitic, and does not become so from the action of extraneous causes. He has within himself the cause of the disease. This is not the case in tuberculosis. Very often a man born of phthisical parents enjoys robust health for years, and is then suddenly attacked by tuberculosis. The child of syphilitic parents is syphilitic at his birth; the child of phthisical parents may develop tuberculosis at five, ten, or fifteen years later. And we may well ask, with Villemin,* how will the upholders of the theory of hereditary transmission explain why the disease should remain latent so long?

"Man and animals," says Rayer,† "may have at birth an hereditary disposition to phthisis, but tubercles are never found in the lungs of the fetus or the new-born of phthisical individuals."

Baron,‡ physician to the Foundling Hospital, who every year examines the lungs of a great number of children, still-born or dying shortly after birth, assures that he has never yet found tubercles in children but one or two weeks old.

Guizot, in four hundred post mortem examinations of the bodies of new-born infants, failed to find a single deposit of tubercle. Gluze asserts that there is no born tubercle.

If, then, tuberculosis can not be directly transmitted, what meaning are we to attach to the term tubercular diathesis? Is it a disposition which certain organisms have to receive tuberculous deposits, and to furnish them with a soil capable of nourishing them; or is it the power of developing tubercle independently of all germs?

We have already seen that the latter view is opposed to both reason and clinical observation. The former theory,

* Etud. sur la Tuberculose, Paris, 1868. Septième Etude.

† Archives de Médecine, comp. 1843, tome i, p. 214.

‡ Bidlot Phthisie Pulmonaire, p. 166.

that by hereditary transmission we are to understand an aptitude or impressive ability to contract it, is the only tenable one. That such susceptibility exists, is proved by the instances in which the children of parents, in whom the disease exists, perish one after another from the disease. Yes, for us, the hereditary transmission of morbid aptitudes, the organic sensibility of Bichat, seems to be a well established fact, a general law governing the organism. Doubtless constitution is transmissible. The child generally inherits from its parents some of their characteristics; strength will engender strength, feebleness generates feebleness. A father whose nervous system is very highly developed, will find the same thing reproduced in his offspring; while another parent, whose sanguineous system is strongly marked, bequeaths it to his children. This transmission of individual peculiarities is, perhaps, more strongly illustrated by the system of vegetative life. This, the basis and foundation of the organism, is generally inherited with all its qualities and defects.

From the moment that the word diathesis was diverted from its original and etymological signification (διαθεσις, a disposition), in order to apply it to certain maladies, confusion and disagreement began; and this state of things has been rendered still worse, by certain physiologists considering the expressions constitutional malady and diathesis as synonymous. Predisposition and disposition are not identical: the first is passive, and indicates simply the power of receiving, or at the very most an aptitude for receiving; the second is active, and indicates a power of production, and direction towards a predetermined end or result.*

Gigot Suard† uses a comparison, borrowed from the moral condition, which is so forcible and so much to the point, that we may introduce it here. "Diathesis or aptitude is no more the disease itself, than a tendency to steal is the theft itself." Here, also, we must discriminate carefully between the disposition and the predisposition. If a suitable occasion present

* Raynaud. Nouv. Dict. Med. et Chir. Prat., tome xi, p. 419.

† Pathol. Experim., 1875, p. 169.

itself, then the predisposition of the thief may lead him to steal; while if he be disposed to steal, he will seek or make an opportunity: The first is a mere passive state, the second one of activity.

We must, then, use the word diathesis in its original meaning,—a particular disposition of the organism, either hereditary or acquired, to contract certain maladies.* It is only in this way that we can account for those cases where children of phthisical parents all suffer from phthisis.

The tuberculous diathesis may then be defined as a greater or less organic disposition of the individual, constitutional or acquired, so that at certain times, and under the influence of certain causes and conditions, tuberculosis is developed in him more readily than in others.

The tuberculous diathesis may render the effect more easily attainable, but it *can not produce tubercle.*

Any part or element which no longer participates in the general or interstitial life of the body, undergoes certain chemical and physiological modifications, which have been termed retrograde metamorphoses or degeneration. This change begins by the organized tissues disintegrating, and their places being supplied by small shining, pearl-like, fatty globules. In the place of true histological elements, we find a detritus composed of fatty matter of variable size, held in suspension in a liquid portion containing albumen and salts. What chemical laws are brought into play in this transformation, we know

* Waldenburg (die Tuberculose die Lungenschwindsucht und Scrofulose, p. 524), cites an instance of six brothers and sisters, who, when they first came under his notice, were strong and blooming, but five out of the six died of phthisis between the ages of twenty-four and thirty-four, the disease beginning in many of them with hemoptysis. The father died of a different complaint, and the mother, up to the age of fifty-three, enjoyed uncommonly good health, being quite free from any symptoms of consumption. She was suddenly attacked with hemoptysis, and expired the same day, her death being subsequent to the commencement of the disease in the children, whose ill-health could not be traced to endemic causes, as they had lived in different localities, and separated from each other. He concludes:—"This is a very remarkable instance where the mother, without having phthisis herself, had the disposition to consumption, and transmitted it to the children, who died of phthisis."

not. All that is evident is, the hydro-carbons of the tissues are broken up, and the fatty matters with the fluid and salts form an emulsion. This fatty formation varies in consistency. Sometimes it resembles cheese, and then receives the name of caseous. The thickening may be produced in two ways:—first, the metamorphosis may take place in organs or parts of organs, rich in solids especially salts, or poor in fluids, as in tubercle; or, second, absorption of the liquid portion may take place, leaving the solid parts, and in either case caseous matter is formed. Absorption of a portion of the fatty material may then follow, and the so-called chalky deposits or masses result, and this may continue until all the fat is removed, and a mass of considerable hardness remain.

With the application of the microscope to the examination of the products of tuberculosis, investigators naturally sought for some characteristic element or body, but as they had to deal with the resultant of a disorganization, in which all form of life had disappeared, they concluded that tubercle was an amorphous product devoid of organization. When histological elements were found, as the small gray, semi-transparent granulations, which had not yet undergone completely this metamorphosis, these were regarded as adventitious, and not as elements of the tubercle; and even to-day we have two forms of tuberculosis, founded upon these two pathological stages of the same change.

Dr. Grancher* has, by his critical study on the unity of phthisis, aided materially in dissipating these views. He sums up the chief proceeds, upon which the dualistic school, led by Virchow, base their theory, as follows:

	Tuberculous granulation.	*Caseous pneumonia.*
Form,	Nodular,	Diffuse.
Origin,	Connective tissue,	Pulmonary epithelium.
Seat,	Extra-alveolar,	Intra-alveolar.
Nature,	Tuberculization,	Inflammation.

A. The definition of tubercle given by Virchow is too limited, since it only comprises the perfect (adult) tuberculous

* Grancher; de l'Unité de la Phthisie; Paris, 1873.

granulation. We must add to the form-type the new nodules, only visible by means of the microscope, and the irregular masses of embryonic cellulo-tissue, which have the same structure and share the same fate as the tubercle, and which are met with in cases of either acute tuberculous granulations or caseous pneumonia, with or without pulmonary granulations. It is advisable, in order to avoid confusion, to adhere to the terminology generally accepted to-day, and to continue to employ the term tubercle to designate the *adult* (perfectly developed) tuberculous granulation, its characteristic representative.

B. If we examine tubercle and caseous pneumonia, as regards their origin, form, seat and nature, we will reach the following conclusions:

1st. Their form is not an absolute differential characteristic, since the former may present itself under an irregular form, as infiltrated tubercle. This infiltration is the best means we have of distinguishing the tubercle due to pneumonia.

2d. If the epithelial origin of the catarrhal cells in which the caseous pneumonia begins, be at all probable, it has not yet been shown that the epithelium does not take part in the production of the small cells of tubercle; and I believe that it has much to do with it.

3d. The seat of both the nodular and infiltrated tubercle does not differ from that of caseous pneumonia. In both tubercle and pneumonia, the alveoli are filled with the cells produced at the expense of the walls. In tubercle there is an agglomeration of small coherent cells; while in pneumonia, or at least at the beginning, the cells are larger, and float in the alveolar spaces.

4th. That there is any difference in the nature of the two products, anatomically or pathologically, is far from being proved. All that can be said to be known is, that in phthisis there are found in the lung:

(*a.*) Neoplasms, cellulo-embryonic, either nodular or infiltrated. (*b.*) Large catarrhal cells, at the beginning of caseous pneumonia.

This is sufficient to prove the existence of two forms of one disease, but not that of two different maladies. On the other hand, there are many reasons in favor of the unity of phthisis; the common duration of the two products; the caseous degeneration of both; the coincidence of the two lesions; and the results of experiments, as inoculation of caseous matter produce at one time tubercle, at others caseous pneumonia.

As histology has advanced, it has shown, little by little, the errors of the German school, and phthiseology has returned to a unity in the nature, though not in the forms, of phthisis.

The most competent clinical and histological writers of to-day agree, in seeking the ultimate cause of tubercle, in a perverse or imperfect nutrition. "Daily experience," says Niemeyer,* "teaches us that a bad state of nutrition is usually accompanied by a feeble endurance of noxious influences. Even without special knowledge of the fact, it is usually assumed, *a priori*, that feeble, badly-fed persons are sickly; that they are especially prone to disease, and do not recover as speedily from its attacks."

Thus, while pathological anatomy, strengthened by histological researches, teaches us, on the one hand, that tubercle is but a normal element, altered, decomposed and mummified, clinical observation points it out as a result of vitiated nutrition. Some of the later writers upon tubercle—Bennett, Bouchardat, Piorry, etc.—have not only ascribed a defective nutrition as its cause, but have even gone further, and attempted to determine the precise change in the digestive functions. Thus, Bennett† declares that a want of power to properly digest and assimilate albuminoid substances and fats, is the cause of tuberculous deposit.

In a diagnostic point of view, nothing gives us a better account of the differences of which tuberculous modifications are susceptible, than the more or less intense and persistent

* Pulmonary Phthisis. Translation, Parke, p. 40.

† Pathol. and Treatment of Pulmonary Consumption. London, 1849, p. 32.

effect experienced by the nutritive functions. We may even go a step further, and state that the alteration of the digestive and assimilative functions is the character proper of the morbid modifications of the organism, upon which depends the development of tubercles.

To what conclusion does a consideration of the symptoms lead us? A pale complexion, yellowish or straw-colored discoloration of the skin, a diminished embonpoint and decrease in strength, a more or less rapid sinking, and a general alteration of all functions; and, finally, a general collapse of the functions, forces, and faculties. Causes and effects then correspond; both diminish the vitality, by diminishing the physical powers of the organism.

This is not a new theory; long before our time physicians and physiologists had recognized the fact, that any agent which tended to diminish the physical energies of the system might become a cause of tubercle. But it is only to-day that these views have received a scientific demonstration.

The physician has but too often the opportunity of observing the insidious march of that terrible failing of the powers of nutrition, under which the organism slowly and silently tuberculizes, until the moment when a congestion or an intercurrent bronchitis, a pleuritic affection, or other accidental cause, locates the trouble in the pulmonary parenchyma.

The weaker one is, the more irritable he becomes; that is to say, the more the organic aggregate is degraded, altered, or morbidly modified, the more it is susceptible, under the influence of the least modifying cause, of undergoing a more considerable degree of alteration, of lesion, and of manifesting a local or general trouble, more sensible and apparent, and capable of showing the idea of a powerful resistance, whilst it is only the effect of a near cessation of life by the organism. That is, *irritation* and *inflammation* are only effects common to all diseases, be they due to an excess or a lack of organic or vital conditions; and they indicate only an excitation, an augmentation, momentary and eventual, relative and local, and not absolute and general, of the organic movement.

There is quite a general belief, founded upon the important part that the blood plays in the functions of the economy, that this morbid state (phthisis) is due to an alteration of this fluid. Blood can be vitiated in two ways, first, through defective absorption of, or failure to introduce into it, the materials necessary to its constitution;* second, through defective excretion, or failure to remove the deleterious products.†

Both chemical and microscopical examinations have failed to show any change in the composition of the blood in phthisis. (Andral,‡ Piorry.§) Experimental physiology has demonstrated that if the blood be alone modified, the tissues remaining normal, then the latter act as purifying agents and assimilate the purified material. (Lebert,‖ Brown-Séquard.**) If the tissues had no influence upon this fluid, we would not have pathological but toxical effects, such as those obtained with curare, ammoniacal salts, and carbon oxides. (Claude Bernard.††)

Hence, the cause of the production of tubercles will not be found in an altered condition of the blood, but in a special change in nutrition. I say special, because through defective nutrition, such disorders as chlorosis, dyspepsia, hypochondriasis, cancer, etc., are produced. Nutrition may be very defective, and yet tubercle may not be developed. The direct organ of nutrition is the lymphatic system (Pidoux), which is divisible into three parts:—first, the lymphatic, or more generally called the connective or plasmatic tissue; second, the lymphatic vessels; third, the ganglia.

Between the prolongations of the fusiform or starry corpus-

* Fourcault. Causes Générales des Mal. Chron. et Spéciales de la Phthis. Pulmon. Paris, 1844.

† Turnbull. An Inquiry into the Curability of Consumption. London, 1859.

‡ Andral. Hematologie Pathologique.

§ Piorry. Médecine Pratique, tome iii.

‖ Anatomie Pathologique Spéciale et Générale, tome i.

** Brown-Séquard. Journal de Physiologie de l'Homme et des Animaux. Première Année, 1858.

†† Claude Bernard. Leçons sur les Substances Toxiques et Médicamenteuses, 1857.

cles of the connective tissue — Robin's cytoblasts — are found irregular spaces called lacunæ, filled with a nutritive fluid, composed of new and used-up lymph, a general blastema, into which the radicles of the lymphatic system dip. By their elective power, the vessels take up those parts of this nutritive fluid, which are to be returned to the venous circulation, and leave the parts necessary to nutrition.

Borden, Bichat, and in our day Virchow, regard mucous and cellular connective tissue as essentially plastic or formative, and consequently as the seat of all neoplasms, whether formative or destructive. Tubercle they regard as formed, like all healthy or morbid growths, immediately in the connective tissue, but at the expense of some of the elements of that tissue, which elements it replaces by others atrophied or pyoid, thus preventing all possibility of reparation. This condition belongs only to tubercle, and when the lungs are the parts affected, gives rise to *pulmonary tuberculous phthisis.*

ACQUIRED PHTHISIS.

By acquired phthisis is understood that under the influence of bad hygienic conditions, or other external causes, acting more or less slowly, sometimes singly, but more often in combination, the individual sees the vital patrimony, received from his ancestors, becoming artificially tainted or infected by the phthisical diathesis, and finds himself exactly in the same condition as the one who had inherited it.

Aretée de Cappodoce* has described a particular conformation of the body, characterized by a narrow and flat chest, long slender extremities, elevation of the scapulæ, a long neck, existing especially in tall people, and generally indicative of a want of vitality. It is an exceedingly rare thing to find a person of such a conformation reaching the average age of man, without developing phthisis.

Probably the cause of the ravages of phthisis in prisons, and in the army, will be found in mental depression. Accord-

* Aretei Cappodocis, Opera Omnia. Lipsiæ, 1828, p. 95.

ing to Laënnec,* there is no external influence more certain to produce this disease than the cause mentioned, if it be deep and lasting. Bandeus,† chief of the medical service of the French army during the Crimean war, states that the majority of the women in the sultan's harem die young from consumption, produced by an unbounded jealousy.

Dr. Buchanan‡ gives, as one of the most common causes of consumption, a damp atmosphere. The so-called "foul air" contains, besides the unhealthy gases, a large amount of vapor of water. Dr. Bowditch, of Boston, states that certain houses, on account of their dampness, are nests for breeding consumption. Where numbers of people are employed in ill-ventilated, badly-lighted shops, more especially if the atmosphere be damp or dusty, badly clothed and poorly fed as they necessarily must be, we find many cases of phthisis. In all trades or occupations giving rise to fine dust, such as knife or needle-grinding, stone-cutting, cotton-carding, milling, etc., the cause of death will generally be found to be consumption. (Greenhow,§ Buhl.||)

A common result of any great disturbance or continued excitement of the generative organs, such as onanism or venereal excess, is phthisis. Both, by their influence upon the nervous system, cause great disturbance of the assimilative functions, and thus prepare the economy for gradual decay. I think that the authors, who have only enumerated these vices among the probable causes of consumption, have not given them the prominence they deserve. Miss Beecher, long ago, warned the mothers of America of the vice which was leading their daughters to the grave, the mad-house, or, worst of all, the brothel.

The suppression of the catamenia, the sudden disappearance of hemorrhoids, the cure of any disease which had pre-

* Auscultation Médiate, tome xi, p. 173.

† Une Mission Médicale en Crimée. Revue des Deux Mondes, 1857, p. 633.

‡ Report of the Medical Officer of the Privy Council for 1867.

§ On Chronic Bronchitis. Philadelphia edition, 1869.

|| Tuberculosis and Consumption. Translation. New York, 1874, p. 148.

viously produced a flux from an organ, may prove a cause of tubercle.

Among the causes which have been given as producing phthisis is a too prolonged nursing. According to the observations of Natalis Guillot, each time the child is nursed from eighty to two hundred grammes of milk are abstracted, so that in the course of a day from one thousand to fifteen hundred grammes are removed. Now, according to the analysis of Regnault, ten thousand parts of milk contain three thousand six hundred and ninety-seven parts of mineral salts, of which two thousand two hundred and thirty-two, or two-thirds, are phosphates. The infant removes daily from the system of its nurse, three and a half grammes of phosphates, or more than a kilogramme in the year.

A too abundant catamenial flow exhausts women, impoverishes their blood, and determines an anemic condition with all its evil consequences. The blood is pale, serous, and colors the linen red, with a yellow areola. This species of metrorrhagia is a sign of a weak constitution, and is often followed by tuberculosis. Here we find the primary cause, viz., chlorosis, aggravated at each menstrual period, and daily tending to further impoverish the blood.

Another cause, and, according to MacCormac,* the only true cause of tubercle, is prebreathed air; for, sooner or later, the uneliminated, because unoxydized, carbonaceous waste will be deposited as tubercle. Without acknowledging that prebreathed air is the only agent capable of producing tubercle, we fully recognize the application of the aphorism of Romazzini,† "such air, such blood." Those pursuing sedentary occupations are far more liable to phthisis than those whose labor requires them to spend much of their time in the open air.

While doubting that phthisis is transmissible from husband to wife, we believe that it may be propagated from the sick one to those who attend him. Whether or not there be a true

* MacCormac on Consumption. London, 1865.

† Maladies des Artisans Trad. Fourcroy, 1778.

miasmatic infection, as some authors feared (Morgagni, Van Zwieten, Morton, Pierre Frank), or others assert (Beaumes,* Staub,† Clark,‡ Dr. Delamarre,§ Buhl‖), it is certain that the fatigue, the watching, the confinement in the unwholesome air of the sick room, the chillings of the night, and above all the sad preoccupation, of which Laënnec signaled the power in fostering the inbred tendency to phthisis, and which are unavoidable in similar conditions, are real and powerful causes of a weakening of nutrition.

Let us, then, note carefully what is most singularly striking, that in spite of their number and diversity, all these causes are held together by a common tie. They all lead to an incontestable weakening of the nutritive forces of the organism.

ACCIDENTAL PHTHISIS.

We are justified in regarding tubercle as an accidental product, when we find nothing in the antecedents, nor in the actual state of the subject, to lead to a belief in the existence of a tuberculous diathesis, but, on the other hand, a normal development of thorax, and sometimes even a physique above the average. The accidental conditions which may give rise to tuberculous formations are numerous. To name the most important causes is to indicate the line of treatment, and in that way be of service from a therapeutical point of view. Hence the necessity to subdivide accidental phthisis into, first, inflammatory; second, scrofulous; third, syphilitic; fourth, hydatid; fifth, diabetic; and sixth, arthritic.

INFLAMMATORY PHTHISIS.

We give that name to accidental phthisis, produced by tubercles of an inflammatory origin, in a person free from constitutional taint. When phthisis follows acute pneumonia,

* Trait. Phthis. Pulmon., 1805, tome i, p. 89.

† Essai sur l'Etiologie des Tubercules Pulmonaires. Strasbourg, 1835.

‡ Treatise on Pulmonary Consumption. London, 1835, p. 238.

§ Séance du 10 Janvier, 1859, Académie des Sciences, Paris.

‖ Loc. Cit., p. 117.

(interstitial, parenchymatous or croupous,) it is only in the rare cases where, from some cause, resolution has been hindered or prevented.

Chronic pneumonia, and especially broncho-pneumonia, is more often followed by phthisis than the acute parenchymatous inflammation. The fatal influence of chronic pulmonary inflammation is especially shown, when the system is so weakened that it is unable to dispose of the inflammatory exudation or pus which fills the ultimate bronchial ramifications. This is often seen in bronchial catarrh, when accompanied by an abundant mucous or muco-purulent expectoration.

In pleurisy, binding adhesions prevent expansion of the chest, and consequently of the true respiratory system, hurry the heart-beat, derange the digestive organs, prevent proper assimilation of food, depress the vital force, and unless emphysema results precipitates phthisis pulmonalis.*

There are, besides the usual form of phthisis, two others: galloping consumption or phthisis florida, and acute phthisis. The former is again subdivided into the galloping and the rapid, which differ only in this, that galloping has a more hurried march and presents less remissions than the rapid. In both forms the caseous degeneration, and consequently the inflammatory symptoms, are present from the earliest stages. In acute granular phthisis, there are no remissions; its march is always onward, like an acute disease, and it may destroy the sufferer in less than a month. Its onset is sudden, and, there may be neither appreciable cause, diathesis, nor disposition.

It seems fit to introduce here the differential diagnosis, at the bedside, between galloping phthisis and typhoid fever, as given by Dr. Metzguer.†

Galloping phthisis differs from typhoid fever in this, that in the former we observe neither the characteristic tongue of the abdominal typhus, the roseate lenticular spots, nor the gurgling noise in the right iliac fossa; besides, the noise in the

* Leaming; Arch. Scient. and Pract. Med., March, 1873, p. 233.

† Metzguer; Etude Clin. de la Phthisie Galopante. Paris, 1874.

ear and the epistaxis are absent, as a general rule, in phthisis. The thermometer, too, gives us a new means of differential diagnosis between these two affections. We know that the thermometrical curve of typhoid fever is characteristic. In the morning there is remission, incomplete it is true; in the evening, an exacerbation of about one degree (Fahrenheit). The period during which the thermometer gradually rises, lasts about five days. If, on the evening of the first or second day, the temperature is over 102° F., it is not typhoid fever. If, on the evening of the fifth day, the temperature be below 102° F., we have as yet nothing to fear from abdominal typhus. Jaccoud* says that in the granular affection the daily changes are from 2¾° to 3½° Fahr.

But there is also another symptom of galloping phthisis, to which attention is called; it is the rapid emaciation, which may, curiously enough, coincide with the preservation of the appetite.

Among the diseases which are most frequently causes of inflammatory phthisis are the exanthemata. Scarlatina, and especially rubeola, as has been most fully demonstrated by Andral† and Michel Levy,‡ are very frequently followed by phthisis. Hooping cough, in very young children, according to Grissolle,§ favors the production of tubercle.

In the treatment of all forms of phthisis, we have to fulfill, at the same time, two opposite indications:

1. To recuperate and fortify the general organism by suitable constitutional treatment.

2. To diminish the local and subdue the general irritation by an antiphlogistic and weakening treatment.

It is the necessity for the fulfillment of both these opposite conditions that has produced so much confusion in the minds of the practitioners regarding the proper treatment, and given rise to almost interminable discussion, as to the nature of phthisis, whether it is of inflammatory or non-inflammatory origin, and whether it should be treated by blood-letting, tar-

* Clinique Médicale. Paris, 1867.
† Clinique Médicale. Paris, 1834.
‡ Gazette Médicale. Paris, 1848.
§ Pathol. Interne. Edition 1865.

tarized antimony, and other depressing measures, or by tonics and a good stimulating regimen. No treatment of tuberculosis can be conducted upon a rational foundation unless it combines, as intimately as possible, not only the similar but also the opposite indications. Thus, though the means adopted are as opposed to each other as they can be, yet both must tend to produce a single result—the return of the organism to its normal condition, and, as a sequel, the cessation of local trouble.

Of all the varieties of accidental phthisis, the inflammatory form is by far the most common; for if we refer to the table given by Scott Alison,* out of six hundred and one cases, two hundred and seventy-seven were due to the influence of cold alone. The disease is characterized by the development of an exudation, which in no way, either as respects origin or local and general effects, differs from the simple inflammatory exudation.

Foremost among antiplastic remedies stands mercury: there are some terms which seem to carry with them a dread, in the minds of the public and even of medical men; none more so than the word calomel. Dr. Leaming† is known among physicians as one of the strongest advocates of this drug; we had best use his own words:—"In extreme cases, those of exceptional violence, or when the amount or extent of exudation is excessive, the powerfully sedative action of calomel may abort the disease so completely, that not a vestige of it will remain; this, too, without any draught upon the life-power of the individual. Twenty, thirty, forty or even sixty grains, placed on the tongue, may be necessary to produce this sedative action. No one but the physician attending can judge of the dose proper to the case. The proper action of the calomel will simply be the disappearance of the grave signs and symptoms. The heart's action will be more regular, fuller, slower. The plastic exudation will rapidly disappear by reabsorption. There will be no purging, no ptyalism, and no exhaustion of

* Medico-Chirurgical Society of Edinburgh, 1824.

† Brown-Séquard; Archives, March, 1873, p. 229.

vital power. I know of nothing so satisfactory in medicine as the proper application of this powerful remedy, when given in the disease needing it, and at the right time. The dose should be given so as not to be repeated. Strike at once; repeated blows may do harm."

In an article on "An abortive form of treatment in diphtheria," Dr. Bayles* says as follows:—"My first intention was, by a vigorous blow, which should resound throughout the whole system, metaphorically speaking, to abort the disease. To accomplish this, I made use of calomel in one courageous dose, given the instant I had decided, with what I had to deal. My dose was never less than ten grains, excepting in infants under one year of age, nor more than thirty. Mixed with pulverized sugar it was given dry upon the tongue, and the mouth was well washed out after it had been swallowed."

Graves, of Dublin,† had, prior to 1840, held the same high opinion of calomel. "But suppose," he says, "you are called to a case, where a young man of scrofulous diathesis gets a bad bronchitis or pneumonia, exacerbates it by neglect, and is threatened with hectic, what is the best plan you can pursue? My impression is that you should treat it as you would treat acute scrofulous inflammation of the knee or hip-joint; in other words, that you should mercurialize your patient rapidly, and at once; do it suddenly and decidedly, but without pushing the mercury too far, and you will often arrest all the symptoms of the disease, as it were by a charm. . . . . I have employed this mercurial plan of treatment in numerous cases of incipient phthisis, and I still continue to use it in this class of cases with the greatest success."

Graves says that he was led to the adoption of this plan by the success which has attended Dr. O'Beirne's practice in acute scrofulous inflammation of the joints. I mention this, owing to a curious coincidence. Years ago, before possessing Graves's remarkable work, from reading Scott‡ "On the

* Virginia Medical Monthly, September, 1876, p. 402.

† Clinical Lectures on the Practice of Medicine. Dublin, 1864, p. 526.

‡ Scott, John. Treatment of Diseases of the Joints. London, 1857, p. 28.

Joints," I was led, needing a revulsive, to the use, instead of leeches and cupping, of a soft cerate, there made mention of, composed of two parts of ceratum saponis and one part of unguentum hydrargyri fortius cum camphora, over the inflamed surface. I find this a powerful means of exciting the superficial vessels, and thus relieving the congestion of the internal organs.

In inflammatory phthisis usually the appetite remains good for a comparatively long time, there are little or no night-sweats, the circulation is normal, and the hectic fever only appears towards the close. Impoverished blood and emaciation are not marked in the early periods of the disease, and hemoptysis is rare. But as the disease progresses, and the last stages are reached, the morbid symptoms which enabled us to recognize this form of phthisis disappear.

NEW YORK CITY. (To be continued.)

EXTRACTION OF FIFTY LENSES THROUGH A STRAIGHT INCISION OF THE CORNEA.

BY J. L. THOMPSON, M. D.

At this date, after cataract extractions have been reported by the hundred, and so many new methods and modifications of old ones have been proposed, many will feel inclined to pass this brief article by after simply glancing at the heading.

Many may suppose that fifty is too small a number of cases to base the results of any one method upon; but the opinion of the writer is, that it is sufficiently large to warrant one in bringing said method before the notice of the profession; and more especially is this the case when an equal or greater success than by any other means follows the same. When one takes into consideration the rapid multiplication of oculists throughout the world, and especially in this country, he must soon see that even this number in any one's practice will take

months and often several years to reach. It is true an exceptional case occurs, now and then, where an oculist finds an unusual number of cataract patients, but he soon works the material off, and then finds that patients so affected bear but a small per cent. to his other eye cases.

Another reason for their sparsity in any one's practice is the increased facility for the study of the eye. The time was, and not many years ago either, when the students of medicine and surgery rarely witnessed operations upon the eye in our colleges and hospitals; but now, no matter how small the college or where located, but few students leave them without having had frequent opportunities for witnessing operations for cataract, and the result is that in nearly every county-seat we find some young man who is willing to operate for cataract; and, if you will pardon the digression, he often unfortunately does so upon his fellow-creatures even before experimenting upon the inferior animals, not taking into consideration the difference between witnessing an operation and the acquiring that educated touch and easy manipulation of instruments, in and about the eye, necessary to its proper performance. He will also reason in this wise to the applicant: You are already blind, and have nothing to lose if the operation is not successful; and I will only charge you one-half the price that Dr. So-and-so asks of you. Such reasoning is often successful, and results in the "punching" of many eyes, and at the same time it keeps patients from those who are better prepared to treat them successfully.

For a long time "Von Graefe's modified linear" was the operation strictly adhered to by myself; with it I was quite successful, but not to the extent that fortune has kindly favored me in the following method, which I was almost forced to adopt by accident as follows: While operating on a small and deeply-set hypermetropic eye, no sooner had the knife entered the anterior chamber than the aqueous humor running beneath the conjunctiva pressed it out, so as to entirely obscure the upper margin of the cornea; the fixation-forceps were removed, and with my finger gently pressing upon the

point of counter-puncture, the knife was prevented from running far beneath the conjunctiva: but, notwithstanding every effort, I failed to remove the apparent chemosis, and it was found necessary to complete the corneal section by immediately turning the knife upon its axis, and cutting directly forward and outward. The iris was then excised, the capsule lacerated, and the lens removed without further difficulty. As this patient did remarkably well, I resolved to make a straight corneal incision in the next case, and since then all of my hard cataracts have been operated on by this method.

The accompanying illustration will readily explain the position of the incision:

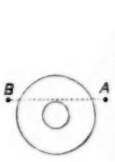

FIG. 1.

FIG. 2.

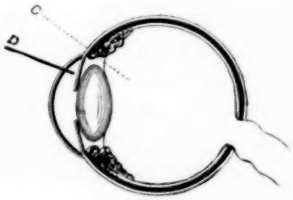

FIG. 3.

The patient is placed upon a table, as I prefer to stand rather than to lean over a bed or lounge, as one has much better control over both his patient and himself. The operation is made without the aid of an anæsthetic. The lids are separated and held by a spring speculum, and the eyeball steadied with the fixation-forceps. The point of a knife, measuring one inch and three-tenths in length of blade, and one-twentieth of an inch in breadth, is entered at *A*, figure 1, one-fifteenth of an inch external to the apparent corneal margin, and one-ninth of an inch below its summit. The knife is, of course, first pointed toward the center of the globe, until the aqueous chamber is entered, when it is passed transversely across to point *B*, where the counter-puncture is made; (one need say to those who have never operated for cataract that, in first cases, one is sure to let the knife slide further under the conjunctiva than is desirable in making the counter-punc-

ture). It is then turned upon its axis while drawing it back, so that the blade looks almost directly forward, when, by a few movements backward and forward — usually three—a straight incision is made through the cornea, one-tenth of an inch below its summit, as seen in figure 2.

The iris is then drawn out by the operator, and cut off by an assistant, according to the method of Von Graefe. Or if the section is made below, one needs no assistant; he can remove the fixation-forceps, seize the iris with the forceps in one hand, and excise it with the scissors in the other, as I did in ten out of these fifty cases. The capsule is then lacerated by a sweep of the cystotome around the pupillary margin of the iris as well as the coloboma, and the lens is removed with the greatest of care, by making slight stroking pressure upon the cornea from below upwards with the vulcanite spoon.

The patient is suffered to rest for a few minutes with a gentle compress held over his eyes. He is then requested to count one's fingers, after which a slightly oiled piece of old muslin is placed over each eye, then a little soft cotton, and over all a flannel bandage, with tape strings at its extremities, is lightly tied. The patient is then placed in bed and requested to remain there for twenty four hours, and is then suffered to sit in an arm-chair or to be led around the room, as he chooses. The dressings are removed, the eyes cleansed, and the cotton renewed twice a day for six days, and one drop of a solution of atropia sulph. is applied until the pupil is seen to be dilated, when it is discontinued. A shade is substituted for the bandage on the sixth day usually, but when there is any tendency to entropium of the lower lid, it is sometimes removed on the third or fourth day. Where elderly persons complain of much pain in the back from lying down, they are suffered to sit up in two or three hours after the operation.

On the fourteenth day, vision is tested, glasses prescribed, (but orders are given that they are not to be used until the eyes feel strong,) and the patient permitted to return home.

In twenty of these fifty cases a double operation was made,

or, in other words, both lenses were removed from the eyes of ten patients at the same time; and the remarkable fact in connection with these is, that the best results followed in every one of them, indeed the greatest acuteness of vision here obtained. One of them is now over ninety-three years, and he can "see to read as well as ever."

The age of the patients ranged from forty-five to ninety; all but nine were over sixty. The cataracts were all hard; forty were nuclear and ten of the cortical variety, but still hard. The length of time which had elapsed since maturity until the day on which they were operated, varied from three months to twenty-three years; and it appeared to have nothing whatever to do with the success of the operation, for the visual acuteness was just as good in the case of longest standing as in that of the shortest duration.

The accidents, or rather complications in these cases, were as follows: Hemorrhage into the anterior chamber, which was not removed when the eyes were bandaged, occurred eleven times; but it proved to be of so little importance that I now cease to regard it with any degree of alarm, especially when I remember that it has occurred in at least one hundred of my iridectomy cases, without causing any mischief whatever. Indeed, it is my opinion that one should not take too much pains to stroke it out of the chamber, for by so doing he may cause more irritation than does the blood by remaining.

Escape of vitreous happened four times. In two it was so small as to be scarcely worth mentioning; in one it amounted to at least one-third. It happened in a patient who had suffered fearfully in one eye for a long time subsequent to an unsuccessful removal of the lens of the other eye some years before. No sooner was the incision made in the cornea than the vitreous commenced welling up and pouring out as from a fountain; the lens sank down, and it was with the utmost difficulty that it was fished up with a wire-spoon and taken out. An iritis followed, which closed the pupil; but, in spite of this, an iridectomy was made three months subsequently, and he was, and still is, able to read ordinary newspaper print.

In the fourth case, it occurred in a very corpulent lady, with very prominent eyes, who informed me that many of her relatives had been operated on, but never successfully. She lost but a few drops during the operation. The lens was removed and the eyes had been bandaged about one hour, when a violent paroxysm of vomiting came on, which caused a large escape of vitreous and the rupture of a vessel of the fundus. This was kept up for two days in spite of every effort to stop it. After the operation, this lady informed me that she was subject to such sick paroxysms, but that as she had just recovered from one before she came to be operated on, she supposed that another would not happen so soon. The eye was completely lost.

The only other eye lost was that of a man aged forty-nine. The operation was very smooth; he could count fingers after the operation, the pupil dilated nicely, and on the tenth day he could see moderate-sized print. He did well until the twelfth day, when, living in a miasmatic region, he had a chill, and then a high grade of fever, which started a capsulitis, then a cyclitis, and finally an irido-choroiditis, which closed the pupil and ruined the eye.

These were the only two failures in the fifty cases; all of the others were able to read ordinary newspaper print when they returned home, which they usually did on the fourteenth day; several, however, went home sooner, and a few remained longer than the time above mentioned. A majority of them could not only read ordinary type but Yager No. 1, which is the finest print that I have seen; and yet notwithstanding this remarkably acute vision, it never equaled $\frac{20}{XX}$ either on the fourteenth day or at any subsequent examination. Twenty-thirtieths is the highest I have ever found where a coloboma of the iris exists. It is true one often finds that S = $\frac{1}{T}$, or $\frac{5}{V}$, or even $\frac{10}{X}$, but this is vastly different from $\frac{20}{XX}$. Two of these patients never had learned to read, but from the ease with which they saw small objects, such as a watch-face, the eye of a needle, etc., I inferred that it equaled at least ordinary reading type.

Number.	Sex.	Age.	Operation.	Remarks.	Duration of Treatment.	Results.
1	Male.....	63	.....	Very deeply sunken eye, aqueous ran beneath conjunctiva, and so complicated operation as to cause a completion of the section lower down.....	14 days ..	S = 20-LXX.
1	Male.....	57	Normal ..	.....	14 days ..	S = 20-L.
1	Male.....	50	.....	Hemorrhage in anterior chamber	14 days ..	S = 20-L.
2	Female ..	57	Normal ..	Both lenses removed at once.....	13 days ..	S = 20-XXX.
2	Male.....	90	Normal ..	Both lenses removed at once; had to remain one week longer than usual owing to attack of cholera morbus ...	21 days ..	S = 20-XL.
1	Male.....	56	Normal ..	Hemorrhage in anterior chamber.....	14 days ..	S = 20-LXX.
1	Male.....	64	.....	Loss of vitreous, iritis, closed pupil, performed iridectomy three months afterwards	28 days ..	S = 20-LXX.
1	Male.....	67	Normal ..	.....	14 days ..	S = 20-L.
1	Male.....	83	Normal ..	Several fibers of capsule left.....	14 days ..	S = 20-LXX.
1	Male.....	57	Normal ..	.....	13 days ..	S = 20-XL.
1	Male.....	72	Normal ..	Went to his residence sixty miles distant to operate; made section downwards	.....	S = 20-XL.
1	Male.....	65	Normal ..	.....	14 days ..	S = 20-L.
1	Male.....	50	Normal ..	Several fibers of capsule left.....	14 days ..	S = 20-LXX.
1	Male.....	74	Normal ..	Became restless, and would go home..	9 days ..	S = 20-XL.
1	Male.....	56	.....	Blood left in anterior chamber when eyes were bandaged	14 days ..	S = 20-L.
1	Male.....	63	Normal ..	.....	14 days ..	S = 20-L.
1	Male.....	57	Normal ..	.....	14 days ..	S = 20-L.
2	Male.....	56	Normal ..	Went to Mace, Ind., and operated on both eyes; section of cornea downwards	.....	S = 20-XXX.
2	Female ..	74	Normal ..	Operated on both eyes by lower corneal section; went to her residence, and left her in hands of a physician to change dressings.....	.....	S = ordin'y print.
1	Male.....	62	.....	Hemorrhage in anterior chamber	14 days ..	S = 20-XL.
1	Male.....	70	....	Escape of a few drops of vitreous	13 days ..	S = 20-LXX.
1	Female ..	50	Normal ..	Several fibers of capsule in pupil.....	14 days ..	S = 20-100.
1	Female ..	51	Normal ..	.....	14 days ..	S = 20-L.
1	Male.....	49	Normal ..	This patient did very well until the twelfth day, when he had intermittent fever, which started a capsulitis, then cyclitis, and he lost the eye.....	29 days ..	S = 0.
1	Male.....	52	Normal ..	.....	9 days ..	S = 20-XL.
1	Male.....	63	.....	Hemorrhage into anterior chamber.....	14 days ..	S = 20-LXX
2	Female ..	68	Normal ..	Both lenses removed at once.....	14 days ..	S = 20-LX.

Number.	Sex,	Age.	Operation.	Remarks.	Duration of Treatment.	Results,
2	Female ..	61	.....	Both lenses at once; blood left in both anterior chambers	14 days ..	S = 20-LXX.
2	Male.....	75	Normal ..	Both lenses r moved at once.....	21 days ..	S = 20-L.
1	Male.....	58	.....	Blood in anterior chamber; patient went home on eighth day; tested vision on forty-second day	8 days ..	S = 20-XL.
1	Male.....	75	Normal ..	Section downwards	13 days ..	S = 20-XXX.
2	Female ..	76	.....	Both operated on at once; hemorrhage into each anterior chamber.....	21 days ..	S = 20-L.
1	Male.....	57	.....	A few drops of vitreous lost.....	14 days ..	S = 20-XL.
1	Female ..	60	.....	A few drops of vitreous lost, hardly worth mentioning, but a paroxysm of vomiting coming up 1½ hours subsequently, the eye was completely lost from hemorrhage.....	14 days ..	S = 0.
1	Male.....	60	Normal ..	....	14 days ..	S = 20-L.
2	Female ..	58	Normal ..	Both operated on at once	13 days ..	S = 20-L.
2	Female ..	45	Normal ..	Both lenses removed at once	14 days ..	S = 20-XXX.
1	Female ..	67	.....	Blood in anterior chamber	18 days ..	S = 20-XXX.
1	Male.....	48	Normal ..	....	14 days ..	S = 20-XL.
1	Male.....	53	Normal ..	Went to Franklin, Ind., to operate	14 days ..	S = 20-L.

The physicians who assisted me in, or witnessed these operations, and who in most instances saw the acuity of vision tested subsequently, are as follows: Dr. F. S. Newcomer, of Indianapolis, thirty-four cases, twenty single ones and fourteen double ones, or, in other words, where the eyes of seven patients were operated on at one sitting; Dr. L. D. Waterman, of Indianapolis, one case where both lenses were extracted at once; Dr. J. M. Dunlap, of Indianapolis, three single ones; Dr. McDonald, Indianapolis, one single and two where both lenses were extracted at one sitting; Dr. Eastman, Indianapolis, three—one single and one double; Drs. Scull, Parsons and Washburn, Shelby county, Ind., two operations at the same time on one patient; Dr. Eddingfield, of Mace, Ind., two operations at the same time on one patient; Drs. Woodburn and Gale, Indianapolis, one; Drs. Armstrong, Cole and Scott, of Kokomo, Ind., one; Dr. Payne, Franklin, Ind., one. Many other physicians have also witnessed the operations above mentioned, but their names I can not recall at present.

It will readily be seen from the engraving above (figure 2), that the incision is rather lower down than that of Dr. Wecker, and yet it is not sufficiently low to interfere with the acuity of vision; but, on the contrary, it is conducive to the same on account of the slight opacity across the upper portion of the coloboma, which practically affords a more central pupil than does the peripheral section, with a clear cornea to its very margin.

A glance at figure 3 will show that the incision is much farther removed from the ciliary body than is the ordinary incision which is usually made. The dotted line C represents the latter, while the dark line D describes the one spoken of in this paper.

The manifest claims of this operation, one would think, are as follows:—First, its great ease of performance; second, less danger of loss of vitreous than in those more peripherally situated; third, less danger of cyclitis, or other inflammations of the uveal tract; fourth, less astigmatism from corneal displacement.

Since writing the above, four cases have been operated on after the same method. Two of them were perfect successes; one has not yet had his vision tested; and one, the most smooth operation ever made, and in which vision was very acute, afterwards died on the fourth day from a malignant typho-malarial fever.

INDIANAPOLIS.

ATTEMPTED ENUCLEATION WITH EXCESSIVE HEMORRHAGE.

BY W. CHEATHAM, M. D.

Clinical Lecturer on Diseases of the Eye, Ear and Throat, Summer School of University of Louisville; Eye, Ear and Throat Surgeon to Kentucky Infirmary for Women and Children, Louisville, Ky.

Mrs. C., aged seventy-five years, very feeble, consulted me in reference to her right eye, in which she had glaucoma with

cataract. The left eye she had lost four years ago from the same disease, the cornea ulcerating and rupturing, evacuating the contents of the globe, and leading to atrophia bulbi. I advised an iridectomy on the right eye, with enucleation of the stump of the left.

November 28. Placed patient under the influence of chloroform, and performed the iridectomy with some little trouble on account of the shallowness of the anterior chamber, the knife becoming engaged in the iris. I then proceeded to enucleate the stump of the left, for fear it might excite sympathetic inflammation in the fellow eye, hoping it would increase the old lady's chances for vision. It is true she had cataract with glaucoma in the right eye; yet, with an almost mature cataract, she could count fingers at the distance of one foot, giving, I think, considerable hopes for vision in that eye after extracting the cataract.

I had about cleared all adhesions on the nasal, upper and lower portions of the stump, and was proceeding to do the same on the temporal side, when I was surprised by a sudden gush of blood, looking to me, at the time, large enough to have come from a severed aorta. I undertook to continue the operation, as it would have taken a few seconds only to have finished. The hemorrhage was so profuse that I was compelled to desist.

Recognizing the fact of the difficulty of the use of a ligature, and also as I thought the hopelessness of pressure when such a large vessel was severed, as well as its dangers, as the hemorrhage might take a backward course, or the pressure cause an extensive sloughing of the parts; taking into consideration also the feebleness and age of the patient, my feelings were far from comfortable. I decided, in less time than it takes to write one of these words, to use compression on the common carotid of that side, and also to soak cotton in Monsel's solution with which to pack the orbit, and make as firm pressure as possible on the plug. Pressure was made with both hands, the patient being still kept under the influence of the anæsthetic. The pressure was continued on the

plug for half an hour; the instant it was relieved the orbit began to fill, and the blood to ooze from around the cotton. I then decided to remove the plug and repack the orbit, which was done, and pressure continued for an hour longer with the hands, and afterwards by means of a bandage and wet muslin folded into a pad. The bandage was not removed for twenty-four hours; the plug was left to slough out, as the least attempt at removal was followed by slight hemorrhage.

November 30. Eyelids beginning to slough, with considerable pain; heart of the plug removed; tonics, hot water dressing and rest advised.

December 1. Slough extending almost completely around the orbit, deepest on nasal side, and below burrowing under the cheek toward the buccal cavity.

December 10. Slough trimmed out, leaving a large fissure above, below and at the nasal side. Adhesive straps were so placed, by the advice of Dr. W. H. Long, who had assisted me from the first, as to approach the sides of the fissure, favor adhesion, and to give support to the lower portions, thereby stopping the burrowing there. It was followed by a rapid and early improvement, the edges beginning to heal together in a short time.

December 18. Patient returned home, with instructions to continue the straps and tonics.

January 1. Received word that the fissures have closed rapidly; she has had no pain, and is in high spirits. The pain in the right eye was entirely relieved by the operation.

The question arises, should the enucleation have been continued to completion? Had the subject been young and full-blooded, I should say, yes; owing to her age and feeble condition, I think it would have been exceedingly dangerous, in fact certain death to the patient to have attempted it.

Louisville, Ky.

Reviews.

The Signs and Concomitant Derangements of Pregnancy—their Pathology and Treatment; to which is added a chapter on Delivery, the Selection of a Nurse, and the Management of the Lying-In Chamber. By WILLIAM MORGAN, M. D., Member of the Royal College of Surgeons, England; Member of the British Homœopathic Society; Physician to the Brighton Homœopathic Dispensary, formerly Physician to the North London Homœopathic Dispensary; one of the Medical Officers to the London Homœopathic Hospital, etc., etc. London, New York and Philadelphia: Boericke and Tafel. 1877.

There has been recently carried on, during several weeks, in one of the leading metropolitan dailies—the New York Times—quite an animated discussion of homœopathy. It was begun and principally conducted, on the part of regular medicine, by a gentleman of great ability and reputation, especially as a lecturer, who has filled several chairs in western schools, and now occupies a high position in an eastern college. The replies were from representative men belonging to the other school, of New York and Philadelphia. To impartial readers, we know by actual observation, there could be no question as to which side got the best of the discussion. The homœopaths exhibited plenty of bad temper, any amount of *pseudo* science, and a surprising discord as to what homœopathy really is; some maintaining that it is what it always was, others that it is no longer *Hahnemannism*—the diversity being so great that outsiders could only conclude that homœopathy is pretty much of an every one-for-himself affair, both in theory and practice.

The controversy brought to our notice the little book whose title is above given. We do not notice it here for its doctrines or for its science!—Heaven save the mark! It is the merest sham of an *ad captandum* business-hunting production

ever conceived; one of which any person should be ashamed who could place after his name the titles of the author—one over which his homœopathic brethren must blush, if they do not fling it aside in absolute disgust. But we notice the work in order to call attention to and expose one prominent feature of homœopathy, not touched in the discussion alluded to, which is abundantly illustrated in its pages. We allude to the constant and persistent perversion of truth—*falsehood* is the word—of homœopathic practitioners in regard to the regular school. Every practitioner knows where a patient has been who, upon entering his office, begins to talk of "*strong medicines*," and the time it will take to get the strong medicines "out of his system!" Every practitioner, as he goes his daily rounds, learns on every hand how he and scientific medicine are misrepresented and slandered. Not often is it done in print so openly as by the author of this book; and since he is a representative man, an author and professor in their school, we will give a few extracts that our readers may see what sort of adversaries they have to deal with.

We pass over the introduction, in which the reader is informed that for all the troubles and trials of pregnancy, the "allopathist," as he calls him, does nothing, because he dare not; "the fear of doing harm suppresses the promptings of interest;" "the sufferer may endure agonies, but the doctor calls to see her and leaves her unrelieved" (p. 5). It would not do to notice this culpable idleness of the regulars, because we should have to make the statement square with what he says further on, and that we can not do! So we slip quietly on to the subject of "Nausea and vomiting—morning sickness." Here we are told:

"For these symptoms bleeding is a favorite practice with the allopathists, notwithstanding that this operation is one of the best known means of producing abortion [?], leeches, purgatives, counter-irritants, enemata of assafœdita and turpentine, salines, narcotics, and almost every known process or drug recognized in medicine, is sometimes adopted by the advocates of the general or so-called orthodox doctrine" (pp. 11–12).

There, now, you have it! Commend us to a man who, being well posted as to the present position of a science, who knows all its shortcomings, is bold enough to start out as a reformer of it! But how slyly he runs in that little conscience-saving word "sometimes."

Again, on "Pain in the breasts" (pp. 41–42), after describing the enlargement, and the pricking and shooting pains, he says:—"For these symptoms, general practitioners resort to severe, and altogether unnecessary, measures. Fomentations, narcotics, leeches, *venesection and tartar emetic*"—(we can not withhold the italics!)—"are among the remedies proposed for such a state in a delicate female."

Again, we are told (p. 89), that for abortion and premature labor, "It is customary for medical men of the allopathic ranks to *bleed from the arm*" (!) And for hemorrhoids, we are also told that "the allopathic doctrine recommends free *purgatives, leeching, bleeding*," (p. 69).

These quotations are enough. We would not insult the author by the suggestion that he does not know any better than this; we, therefore, leave him to sit down on the other horn of the dilemma, and make himself as comfortable as he can. Meanwhile, whenever any of our readers wish to prove the proposition that homœopathy sustains itself by deliberate and persistent falsification and misrepresentation of regular medicine, they can find abundant proofs in the pages of this little book, with a big title and a stupendous dedication to the "Mothers of England." J. C. R.

Hospitals: their History, Organization and Construction. Boylston Prize Essay of Harvard University for 1876. By W. Gill Wylie, M. D. New York: D. Appleton and Co. 8vo., pp. 240. 1877.

The first chapter is taken up with a sketch of the origin and history of hospitals, and the author calls particular attention to the fact that hospitals existed in India and other countries before the christian era, and strongly emphasizes that

they do not owe their origin to the influence of christianity. It is pleasant to be reminded that even in remote ages, and in barbarous lands, human nature was not destitute of that genuine sympathy with the sufferings of others which finds expression in active efforts for their relief. It is, indeed, to an inherent desire to relieve suffering in others, and to an instinct which causes us to fly from pain, that medical art and science owe their birth. But no one at all acquainted with the history of hospitals, or even after reading Dr. Wylie's book, can forget that before the christian era hospitals were exceedingly few, and that it was christianity that gave the strong impulse to human beneficence, which caused a wider and more general interest for the sick and poor; and that under the benign influence of christian spirit and faith that hospitals grew up everywhere, became numerous and flourished.

The second chapter on the "Relation of Hospitals to Pauperism," is quite good, and presents in short space some important truths that are often overlooked. The third chapter, on Hospital Organization and Management, furnishes nothing new. The fourth chapter, on Construction of a Civil Hospital, and the fifth chapter, on Warming and Ventilation, are, perhaps, the most faulty in the book, setting forth dogmatically a number of inaccuracies and unproven theories.

Chapter VIII, on Arrangement of Buildings, is one of the best in the book, and contains safe and sound rules which often enough are strangely ignored. The author insists that the "autopsy and pathological building" should be separated from the rest of the grounds by a high wall and by intervening trees and shrubs. In some places these departments have no separate building, but are consigned to rooms in the main building of the institution, and in close propinquity to the wards. He urges that the doctors in the hospital, and even those who visit the wards, should not be allowed to make, or even be present at, a post mortem examination of an infectious case. This wholesome precaution is too often neglected. The "out-door dispensary" Dr. Wylie justly regards as an essential part of a well organized hospital, and believes it should

have a separate building and entrance, both for the sake of cleanliness and order, and also to prevent the entrance of infectious and contagious diseases.

In chapter IX, the "Relations of the Medical School and the Training School for Nurses," are discussed. The author enumerates the qualifications he believes necessary to medical students before beginning the college course, and then lays down a plan of studies for the whole under-graduate period. These matters have certainly no direct connection with the history, organization or construction of hospitals, and their consideration in a work whose ostensible object is that of the volume before us is a work of supererogation.

The tenth chapter relates to the improvement of hospitals now in use, lying-in hospitals, hospitals for convalescents, army hospitals, insane asylums, and is the last in the volume excepting the appendix, containing some reviews by the author.

The book contains much that is valuable, and the style is pleasant; to the medical man it supplies nothing new, and to the unprofessional reader it is in many respects misleading. On perusing it one is forcibly reminded of Lessing's celebrated reply, when he was asked to give an opinion of some literary work. "It contains," said he, "some things which are new, and some things which are true; but the things that are true are not new, and the things that are new are not true." The paper and typography are good. J. A. O.

Landmarks, Medical and Surgical. By LUTHER HOLDEN, F. R. C. S., Vice President and Member of the Court of Examiners of the Royal College of Surgeons of England; Surgeon to St. Bartholomew's and the Foundling Hospitals. From the second English edition. Philadelphia: Henry C. Lea. 1878. 8vo., pp. 128.

We first saw these "Landmarks" some years back in St. Bartholomew's Hospital Reports, where they appeared as a contribution by Mr. Holden. They attracted our attention at

the time, and often since we have made free use of them in our lectures on clinical surgery, where we found them great helps to the student. The object of the author has been to collect, in a compact form, the leading landmarks which help practical surgeons in their daily work, and to forward students in getting "the habit of making the eye and the hand work together, and to educate the 'touch' upon the normal body." By "medical and surgical landmarks," we understand certain "surface-marks on the living body, such as lines, eminences, depressions, which are guides to, or indications of, deeper-seated parts."

Mr. Holden's efforts to create among the students of St. Bartholomew's—his first audience—the habit of examining the living body with "anatomical eyes" and "surgical fingers," are certainly in the right direction; for no one can be counted a really good surgeon or physician, who does not possess what has long been aptly called the *tactus eruditus*. The usefulness of our author's labors will be much enhanced now that his original paper has been, with some valuable additions, put in a small and very handsome volume. To those of our readers whose memories have grown rusty, in the matters of which it treats, the work of our author will prove a real comfort. To students in medicine or surgery it will be a real help.

On the Uses of Wines in Health and Disease. By FRANCIS E. ANSTIE, M. D., F. R. C. P., etc. Reprinted from the Practitioner. London: MacMillan and Co. 1877. Philadelphia: Lindsay and Blakiston. Louisville: John P. Morton and Co.

Part I, on the place of wines in the diet of ordinary life; Part II, on the uses of wines in disease: section 1, wines in acute disease; section 2, wines in chronic disease.

The author is an advocate for the moderate use of wines in health, and places great reliance on them in the treatment of disease. The lamented Anstie never wrote anything that was not the best of its kind.

A Guide to Therapeutics and Materia Medica. By ROBERT FARQUHARSON, M. D., etc. Enlarged and adapted to the United States Pharmacopœia, by FRANK WOODBURY, M. D. Philadelphia: Henry C. Lea. Louisville: John P. Morton & Co. 1877.

This is a valuable addition to the literature of therapeutics. In a commendably small compass the author presents the accepted doctrines of the day concerning the therapeutical and physiological action of medicine. "By a convenient arrangement, the corresponding effects in health and disease of each article are presented in parallel columns, not only rendering reference easier, but also impressing the facts more strongly on the mind of the reader."

The author gives some useful general rules for prescribing, and in speaking of prescribing for children, he points out the importance of knowing the peculiarities of child-life concerning the action of medicine. He cites, for instance, some active remedies which are beneficially given to children in proportionately very large doses. He has given to a child of ten, suffering from incontinence of urine, two fluid drachms of belladonna, with good effect; and he commonly begins with twenty minims in a child of two or three years. He has prescribed ten minims to an infant of six months with remarkable benefit. Fowler's solution being singularly well borne, he gives five or six minims to children of five or six years, and pushes it even to ten minims if necessary. Prussic acid, diluted, one to three minims may be given at the same age. Strychnia is well borne; and he has given one fluid drachm of tincture of iron thrice daily to a girl of six years with excellent results. Dr. Farquharson says also that children require larger purgative doses proportionally than adults, and the same is asserted of ipecacuanha as an emetic. He advocates the use of English instead of Latin in writing prescriptions.

The American editor considers the method of graduating doses for children proposed by Prof. Cowling, of the University of Louisville, probably the most practical yet suggested. It is as follows: The proportional dose, for any age under adult life, is represented by the number of the following birth-

day divided by twenty-four. Thus, for one year, $\frac{2}{24} = \frac{1}{12}$; for five years, $\frac{6}{24} = \frac{1}{4}$, etc.

On the Surgical Treatment of Perityphlitic Abscess. By J. H. POOLEY, M. D., Columbus, Ohio. 15 pp.

In this pamphlet are given the history and treatment of four cases of perityphlitic abscess. In the first case an incision three inches in length, an inch and a half above Poupart's ligament, was made. The moment the fascia transversalis was incised, there was a gush of dirty offensive matter, nearly a pint. A tent of lint was introduced, a poultice applied, but no morphia given, as the patient was mostly relieved of pain. The next day, while syringing out the abscess, there was discharged the whole appendix vermiformis, in a sloughy, pulpy condition. There was a communication with the intestine, but the patient entirely recovered without a fecal fistula resulting.

In the second case no fluctuation could be detected, but on incision "a large quantity of stinking matter was evacuated." Stimulants were necessary in this case on account of the prostration, but the patient fully recovered.

The other two cases reported were in the practice of Dr. S. D. Turney. The abscesses were opened in front of the ant. sup. spinous process of the ilium, and considerable pus evacuated from each.

One symptom pointing to abscess where fluctuation can not be detected, Dr. Pooley says, is local œdema of the integument over the swelling; it is almost an infallible sign of deep suppuration.

State Regulation of Vice—Regulation Efforts in America—Geneva Congress. By AARON M. POWELL. New York: Wood and Holbrook, Publishers, 13 and 15 Laight Street. 1878.

The author opposes the licensing of prostitution on moral grounds, and contends that it is a lamentable failure as a method of diminishing disease or decreasing prostitution, both in Europe and America.

Clinic of the Month.

NOTE ON THE USE OF THE CALOMEL VAPOR BATH.—Mr. Henry Lee, F. R. C. S., Surgeon to St. George's Hospital, London, in the Lancet of February 9th, says:

In the American Practitioner for September, 1877, Dr. D. W. Yandell has given, perhaps, the fairest and most impartial account of the different modes of using mercurial fumigation that has yet been published. It is twenty-three years, Dr. Yandell remarks, since he commenced the use of the mercurial vapor bath, and he has used it ever since. Other forms of mercurial treatment are also employed, but, where circumstances permit of it, he prefers that to any other.

Dr. Yandell commenced his experiments with what he conceived to be Mr. Langston Parker's apparatus, with the gray oxide of mercury, but found the degree of heat necessary to vaporize the powder a very serious objection. The bisulphuret was next tried, without benefit. The irritating fumes of the sulphur and the heat acted injuriously. It was then found that the so-called cinnabar that he used contained ninety per cent. of lead to ten per cent. of mercury. Unadulterated cinnabar was now used, mixed with the gray oxide, and the results obtained were more satisfactory than with either alone. Still the extreme heat necessary to vaporize the latter and the suffocating fumes of the former told heavily against their use. At length calomel was tried, and "the mere mechanical troubles with the fumigations were now virtually at an end."

Dr. Yandell found, however, that his patients did not improve so rapidly as mine did in London, and asks, with much point, what the explanation can be? We both used the same apparatus, and the same quantity of calomel, and why should the same treatment cure quickly in London, and not cure

quickly in Louisville? The solution of this question is not difficult, and for the benefit of others I wish to answer it publicly rather than in private communication.

The great majority of those at first treated were hospital cases, and, as Dr. Yandell says, the London Lancet of that day abounded in reports of such cases. He gives me the credit, which I also claim, of having reported the cases faithfully. The patients, often several in succession, were placed in a box in which the ten or fifteen grains of calomel were volatilized. The room in which the box was contained was small, and, looking back upon the rapid and almost uniform results obtained, I have no doubt whatever that the patients got the benefit of some of the calomel that was left in the box, and perhaps in the room, in addition to the ten or fifteen grains that was devoted to their individual use. In private practice I generally directed patients to use the same cloak night after night, and to sleep in it,* and thus the calomel vaporized one night was again to some extent utilized the next.

Dr. Yandell found that in order to produce the desired effect he had often to use one scruple, half a drachm, or a drachm of calomel for each bath. Where patients like to have a clean cloak for their baths, and wash the calomel off by means of baths, I have, as he suggests, found the same thing, so that substantially his experience and my own coincide.† It may be well here to mention that I now use calomel that has been previously resublimed two or three times. Ordinary calomel is less affected by heat or moisture than any other preparation of mercury, but still it does contain a certain amount of hydrochloric acid, the presence of which may be indicated by a piece of moist litmus-paper held in the fumes as they arise. This free hydrochloric acid is driven off in a great measure by sublimation, and the pure calomel thus prepared is less irritating than the ordinary calomel of commerce. It should also

* The cloak usually employed is called moleskin, and makes a very comfortable night-dress.

† Half a drachm of calomel is the quantity which practically I now recommend to be used for each bath.

be observed that the water I originally used was principally for the purpose of preventing irritation from any fumes that might be generated during the action of the baths, and I find that an ounce on each occasion is quite sufficient. If more water be employed, more heat is necessarily required in order to boil it. The vapor of the water is in part deposited on the patient's skin; this must in some way be removed before he is comfortable, and some of the calomel is necessarily removed with it. Dr. Yandell uses a pint of water in the apparatus which he has depicted, and the patient has thus a combined vapor and calomel bath. This, no doubt, may be very useful where such a combination is intended, but the effect is often very different from that produced by the calomel bath alone; a much greater amount of perspiration is induced, and this the patient, when the bath is repeated night after night, can not bear. The perspiration also tends to remove the calomel from the skin.

Dr. L. P. Yandell, Jr., is of opinion that brisk friction after the sweat, made with the coarsest towel, and until the skin is all of a glow, actually promotes the action of mercury, and conduces to its more rapid absorption. This no doubt may be the case, but it involves a different principle. The calomel is rubbed into the skin in a similar way as the mercurial ointment was in olden times.

Wounds of the Palmar Arches.—In the Edinburgh Medical Journal, February, 1878, we find the following valuable article on this perplexing and often dangerous injury:

Every surgeon who has had an opportunity of seeing a wound of the palm, involving one of the palmar arches, knows how difficult it is to arrest the hemorrhage. Dr. Alexander Ogston says:—"I have seen plugging of the wound, flexion at the elbow-joint, vertical elevation of the arm, pressure on and deligation of the arteries of the forearm and arm, fail to arrest the bleeding from a wounded deep palmar arch."

The practitioner who meets with such a case for the first time generally supposes that the bleeding from a wound that

presents such a trifling appearance may be restrained by simple measures; and, besides, he feels some natural reluctance to cut into the structures around the wrist. Instead of enlarging the wound and securing the bleeding artery, compresses and a tight bandage are applied; but, as an oozing of blood still continues, recourse is had to styptics, then a needle may be passed deeply into the wound, and, lastly, the tourniquet is put on. As the bleeding usually ceases at times, he is encouraged by a delusive hope that he will yet be able to stop the hemorrhage, and he therefore perseveres with these so-called simple measures until the patient becomes weakened by the loss of blood, and inflammatory swelling appears in the forearm.

White has well described this state of parts. "On the seventh day," he says, "I was called in consultation with Mr. Allan to take off the arm. We found his hand and arm swelled to three times its natural size, from the frequent use of the tourniquet, which had been under a necessity of being moved to different parts of the arm on account of the excoriation it had occasioned. For the last twenty-four hours it had been applied almost without intermission from a dread of his bleeding to death."

Owing to the palmar fascia and the other structures, the wounded artery can seldom be seized until the wound has been dilated.

This is an injury which seems to be far from being uncommon; for, since 1876, no less than four cases have been recorded within the columns of the British Medical Journal. In the case reported by Dr. Ogston, the deep palmar arch was punctured; the wound was situated on the radial side of the wrist, and was caused by a knife. Nine days after the injury was received, Dr. Ogston cut down on the metacarpal bone of the index finger (from the back of the hand), separated the attachment of the abductor indicis from it, and exposed the wounded part of the arch; then, lifting it up by a tenaculum, applied a ligature on each side of the puncture. The bleeding was at once arrested, and did not return.

In Dr. Donald's case, it was found necessary, nearly six weeks after the wound, to tie the brachial artery. The ligature was applied on the 25th of February; but on the 4th of March the bleeding returned, and the radial and ulnar arteries were tied. The hemorrhage ceased, and did not recur. On the 30th of March the man was dismissed cured; and, six weeks afterwards, the arm was found useful and natural in size.

In Mr. Barwell's case the wound in the arch was caused by the bursting of a lemonade-bottle. The patient was admitted into Charing Cross Hospital on the 10th of February, 1877, and, although compression was tried, and a needle passed beneath the artery, the hemorrhage frequently recurred, and on the 21st of February the brachial was tied at its lower third. On the 17th of March the patient, a female, left the hospital with the use of her hand.

In the case treated by Mr. Sydney Jones, the wound in the palmar arch was caused by the breaking of a bottle. A small traumatic aneurism formed in the course of the superficial palmar arch. A carbolized catgut ligature was applied to the brachial artery at its lower third. At the end of a few weeks the lad left the hospital with all the wounds healed, and with the "hand perfect."

Considerable diversity of opinion seems to exist amongst surgeons as to where the ligature should be applied; and from these cases it appears that the brachial artery, or an artery representing it, may be tied without arresting the hemorrhage. Bell says, in his treatise on the Nature and Cure of Wounds, that the wound should be cut up freely until the bleeding vessel is exposed. But after the forearm has become inflamed and swelled, many surgeons would hesitate to do so, and prefer deligation of the brachial artery. Bell, however, goes on to say, "And in this particular case, the parts are so massed together, that he (the surgeon) can distinguish no one part from another, unless he prolong his cut either above or below the place in which the blood is extravasated where the arteries are free; in short, as he cuts through two inches of

confused substance on so naked a part as the wrist, *e. g.*, he hardly doubts that he is cutting through the muscles and everything, while in fact he is only cutting through the skin, thickened to this degree by inflammation." When the superficial arch is wounded the bleeding may be said to come from the ulnar, when it is the deep arch from the radial artery.

Both of the vessels may vary in their place of origin; but more especially the radial artery, which may arise very high up in the arm. "In ninety-four cases out of four hundred and eighty-one, or about one in five and one-ninth, there were two arteries instead of one in some part or in the whole arm." (Quain.) These variations will sometimes account for the failure of the ligature when applied in the course of the brachial artery. A consideration of this fact, along with the distance and importance of the brachial artery, would seem to favor the opinion that this ligature should be applied to the wounded arch.

Bromide of Potassium in the Uncontrollable Vomiting of Pregnancy.—In the American Journal of Medical Sciences, January, 1878, Dr. S. C. Busey gives an account of several cases where the bromide was used successfully in the treatment of the above disorder, when almost all other remedies had failed, and the patients were very nervous, with a feeble circulation threatening dissolution. The relief given usually occurs from six to twenty-four hours after beginning to use the remedy; and the treatment has not failed in any case which has come under the observation of the writer.

Dr. B. describes the manner of administering the bromide as follows: "As a rule, the bromide, in doses varying from thirty grains to one drachm, dissolved in beef-tea, to which brandy and laudanum may or may not be added, should be given (per rectum) every four hours, until the nausea and vomiting have ceased, the stomach will retain some bland food and stimulants if necessary, and then it should be gradually withdrawn by extending the intervals between the enemata."

TREATMENT OF TETANUS.—This is an abstract of six different articles on the subject of tetanus, in the London Lancet, February 16, 1878.

The first paper, by Eben Watson, M. D., is written to show the effect of nerve-stretching in acute traumatic tetanus. Two cases are given where the finger and hand were badly crushed. The operation in both cases consisted in cutting down over the upper part of the brachial artery, and exposing the median, ulnar and musculo-spiral nerves, and taking them up with the fingers and thoroughly stretching them. The severity of the convulsions was lessened by this treatment, but both cases resulted fatally, notwithstanding the calabar bean was also used.

The second article, by A. P. Boon, M. R. C. S., is a résumé of five cases of tetanus with four recoveries. The treatment was, first, exclusion of all draughts and keeping the room dark and quiet; second, give nourishment freely and frequently in a liquid form, and also stimulants from the beginning; third, never give purgatives, as purgation irritates the nervous system; fourth, hydrate of chloral, with extract of cannabis indica, is to be given in rapidly increasing doses until the frequency and severity of the spasms are controlled.

The third article is by Dr. E. Watson Paul, a narration of one idiopathic case, treated by hypodermic injections of atropia sulph., and by injections (per rectum) of stimulants and nutriment, with ten grains of hydrate of chloral every hour. Patient recovered.

The fourth article is by W. R. G. Samuels, M. D. In this case the tetanus was caused by a splinter of wood, an inch and a quarter in length, imbedded in the muscles of the leg for a week. The treatment consisted in large doses of bromide and chloral, also, cutting down through the wound and dividing the musculo-cutaneons nerve, the periphery of which nerve had been irritated by the splinter. The patient lived but a few days.

The fifth article, by Arthur Tuxford, M. D., relates the history of a case of tetanus in a boy, caused by the stings of three wasps. The treatment consisted in opening the bowels

freely first, and then giving beef-tea and brandy, with bromide and chloral. Entire recovery within a month.

The last article is by Archibald Lawson, M. R. C. S. A boy, ten years old, ran against a scythe, cutting his instep badly. Sutures were inserted, and the wound dressed. Nine days after, tetanus was well developed, with a pulse of 144, temperature 103°. In this case no drug was administered except chloral, which was given, eight grains every hour, and occasionally a dose of sixteen grains. Stimulants were not given, and no nourishment except milk.

Gelsemium Sempervirens in Neuralgia.—The action of this drug in affections of a neuralgic character has recently been studied by Dr. Emery-Heroguelle, who made it the subject of his inaugural thesis. Taken in a large dose gelsemium produces frontal headache, stunning, visual troubles, diplopia, contraction of the pupil, and dropping of the upper eyelid, and also weakness of the legs. The author reports six cases of intoxication from this drug, taken in mistake. Gelsemium is administered in powder or in pills in the dose of three-fourths of a grain to three grains of the powder of the roots. It may also be given in the form of tincture, made with one hundred parts of alcohol at 60° to five parts of the powdered root. The dose is from forty to eighty drops. A syrup may be also made by adding fifty parts of the tincture to one thousand of simple syrup. M. Emery-Heroguelle reports thirty-one observations in reference to the action of the drug on neuralgia. From an analysis of the results, it appears that gelsemium may be especially looked upon as an anti-neuralgic; that it acts favorably in cases of dental neuralgia of the fifth pair, of the frontal, temporal, supra and infra-orbital nerves, the brachial plexus, the intercostal and ilio-lumbar nerves. Sciatic neuralgia appears to resist rather more than other neuralgias the calming effects of this tincture. The author considers gelsemium a powerful sedative in neuralgia, especially in those varieties which are not accompanied by local fluxion in the affected point. (Medical Examiner, Dec. 27, 1877.)

Notes and Queries.

CONTRADICTORY CRITICISM FROM BOSTON AND PHILADELPHIA.—We have always looked upon Boston and Philadelphia as two of the most important medical centers and sources of knowledge in the world, and been inclined to believe that what these cities did not know upon professional subjects was unknowable, or else not worth the knowing. But, alas, our faith has just received a rude shock. We read in the Boston Medical and Surgical Journal, in reference to a monograph recently translated from the German,* that "the translation is very well done;" and then we turn to the Philadelphia Medical Times, and find the same work declared to be "vilely translated." Such discordant judgments are exceedingly trying to us who do not live quite as near the sunrise as these great authorities. "Down South" and "out West" are expressions sometimes used by some of our eastern medical friends, as if those living outside of the triangle made by New York, Philadelphia and Boston, had neither local habitation nor name. And now for the benefit of these outside barbarians, we hope New York will give the deciding vote as to the merits or demerits of the translation referred to. Such decision failing, we should be tempted to adopt the desire of Charles Lamb, who once wrote a friend as follows: "I've often wished I lived in the Golden Age, before doubt, and propositions, and corollaries got into the world."

* Professor De Morgan, of University College, London, once alleged as to German "seven deadly sins of excess—1. Too many volumes in the language; 2. Too many sentences in a volume; 3. Too many words in a sentence; 4. Too many syllables in a word; 5. Too many letters in a syllable; 6. Too many strokes in a letter; 7. Too much black in a stroke." Shall we not add to these deadly sins of excess, this deadly sin of defect, its being untranslatable into English, so that competent authorities are directly antagonistic as to the character of a translation?

COMPENSATION OF MEDICAL EXPERTS.*—The Supreme Court of Indiana has rendered the following decision in the case of Dr. Buchman v. The State, appealed from the Allen County (Ind.) Criminal Circuit Court:

One Hamilton was on trial charged with the commission of a rape. Dr. Buchman being called as an expert, refused to give his professional opinion without being compensated in an amount greater than the ordinary witness fee. The court being of opinion that the witness was required to answer the questions without compensation other than ordinary witness fees, he was committed as for contempt. From the commitment the witness appealed.

Abstract of opinion.—A physician or surgeon, in respect to facts within his knowledge, stands upon an equality, in reference to compensation, with all other witnesses. But can he be compelled to give a professional opinion without compensation, other than the ordinary witness fees? In England there is some diversity in the decisions in respect to the question whether an attorney or medical man is entitled to higher compensation for attendance, as a witness, than ordinary witnesses. This diversity, however, relates to witnesses required to testify to facts, and not to give professional opinions. In respect to professional opinions, we are not aware of any diversity of decision.

A witness, selected by a party to give his opinion on a subject with which he is peculiarly conversant from his employment in life, is not bound as a matter of public duty to testify; and the party who selects him must pay him for his time before he will be compelled to testify. 1 Car. and Kir., 23; 1 Sprague (U. S.), 276; 13 Abb. Prac. Rep. (N. S.), 207; Ordronaux Juris. Med., § 114; 2 Phil. Ev., 4th Am. ed., 828.

We proceed now to test it by the constitution of the state. Section twenty-one of the bill of rights provides that, "No man's particular services shall be demanded without just compensation." Under this provision of the constitution, this

* We are indebted to Mr. Hiner, Librarian of the Supreme Court, for the abstract of this very important decision.

court held that the court could not demand the professional services of an attorney without compensation. 4 Ind., 525. If the professional services of a lawyer can not be required in a civil or criminal case, without compensation, how can the professional services of a physician be thus required? Is not his medical knowledge his capital stock? Are his professional services more at the mercy of the public than the services of a lawyer? When a physician testifies as an expert, by giving his opinion, he is performing a strictly professional service. The purpose of his service is not to prove facts in the cause, but to aid the court or jury in arriving at a proper conclusion from facts otherwise proved. All attempts to make a distinction between attorneys and physicians are frivolous.

If physicians or surgeons can be compelled to render professional services, by giving their opinions on the trial of criminal causes without compensation, then an eminent physician or surgeon may be compelled to go to any part of the district or state, at any and all times, to render such services, without other compensation than such as he may recover, as ordinary witness fees, from the defendant in the prosecution, depending upon his conviction and ability to pay. This, under the general principles of law and the constitution of the state, he can not be compelled to do.

THE TOLEDO MEDICAL AND SURGICAL JOURNAL.—We have heretofore referred to this journal as one of the best and most useful of American medical publications; indeed, it is worth more to the doctor than some journals we might name which make greater pretensions and furnish a larger number of pages. Opie replied to a frivolous fellow who asked him what he mixed his paints with, "with brains!" The T. M. and S. Journal is edited with brains.

We take pleasure in informing those who wish to subscribe for this excellent Toledo publication and for the American Practitioner, that the two journals will be furnished them for $3.50 yearly: of course this proposition is for new subscribers for 1878.

MALPOSITION OF THE STOMACH.—Dr. George Cannon, of Boscobel, Wisconsin, reports the following remarkable malposition of the human stomach, as shown by a post mortem examination:

Upon making an incision, commencing at the xiphoid cartilage and continuing down the median line nearly to the pubes, a dark tumor (in color much resembling the liver) was revealed all along this line, so soon as the abdominal wall was fully divided, and it extended to within about four inches of the pubic junction. Lateral incisions being made, whereby the abdominal viscera were more fully exposed, the startling discovery was made that the dark object was really the stomach in a highly congested state. When fully exposed it presented the appearance of a distended colon, minus the band, having a uniform diameter of about four inches. The cardiac end was resting in the left iliac, and to the right of the median line was found the pylorus—all being secured in this remarkable position by intestinal integuments. From this point the organ ascended (not strictly in parallel lines, for there was a lapping of the lower portion), and formed an arch resting against the diaphragm. The position of the cardiac end involved the necessity of a very considerable elongation of the œsophagus, and correspondingly the location of the pylorus changed the duodenum, which was also elongated to enable it to connect with the jejunum. In all other respects the alimentary canal was normal.

The deceased was forty-five years old, and by occupation a farmer. Two days previous to his death he was attacked with severe pains in the hypogastrium, and the physician in attendance, after carefully noting the symptoms, concluded that he had a case of intussusceptio. Counsel being called, a different conclusion was reached, and the difficulty was declared to be obstructed feces. However, all efforts proved futile, and the man died. The autopsy developed the fact that stricture of the pylorus was the cause of death. Now, here was a man who had reached the age of forty-five, with health up to the average, having a digestive apparatus so strangely con-

structed that it would seem impossible for digestion to be successfully carried on; and yet the facts clearly prove that the abnormal position of so important an organ as the stomach (which must have obtained during fetal life) did not affect the health of the individual.

In Todd's Cyclopædia of Anatomy, Vol. V, page 404, the variety of the malposition which Dr. Cannon has reported, is referred to. In Atlee's work on Ovarian Tumors, page 312, a case of dilatation of the stomach resembling an unilocular ovarian tumor is reported. Indeed, the similarity between the case of Dr. Atlee and that of our correspondent is, in many respects, most striking: in each patient, too, there was stricture of the pyloric orifice, though in that of Dr. A. the stricture was malignant.

HONORS TO THE LATE DR. L. P. YANDELL.—Seldom has the death of an eminent member of the medical profession in this country, called forth a more general expression of sorrow than has that of Dr. Yandell. Many and eloquent tributes have been paid to his memory. One of the best of these was by Dr. T. S. Bell, in an address delivered at the recent Commencement of the Medical Department of the Louisville University. Dr. Bell was peculiarly fitted to pronounce a suitable eulogium upon the departed; he had been a pupil of Dr. Yandell's, and long been a professional associate and devoted friend. We hope this admirable address, this just tribute, already published in the Courier-Journal, will be put in more permanent form. To it might well be added the excellent sketch of Dr. Yandell, and a list of his contributions to medical literature, from the pen of that indefatigable worker, Dr. J. M. Toner, published in the Nashville Journal.

DR. DAVID W. YANDELL.—Some time in March Dr. Yandell will go to Europe, remaining a few months. During his visit abroad he will write frequent letters for the American Practitioner. Those who know how peculiarly gifted he is as a writer will anticipate these letters with great interest.

Toledo School of Medicine.—The annual announcement of this school for 1878 is before us. "The primary object of this school is to provide that preliminary instruction requisite, or at least desirable, for admission to the medical college;" that is, "the school shall stand in the same relation to the medical college, that academies or high schools do to colleges or universities." There is a hospital in connection with the school, also a museum, laboratory and dispensary clinic.

The instruction here is to take the place of a preceptor, and it will probably be very superior to the old plan of preparing students for medical schools. We hope the school may be encouraged by a large attendance, and wish there were more institutions of the same kind, with only four or five colleges in the United States that had the power to confer the M. D.

Deaths of Eminent Men.—It seems as if this winter were making sad havoc with names eminent in our profession. Last month we referred to Peaslee, Yandell and Stokes as having fallen; and this month we have to record the departure from this life of Dr. Fleetwood Churchill, so distinguished in the three departments—obstetrics, gynecology and pædiatrics—a man whose loveliness of character, and whose kindness especially to American physicians visiting Dublin, were worthy of all remembrance; and also of the great French physiologist, Claude Bernard.

Medical Graduates at Louisville, Cincinnati and Indianapolis, 1878.—The number of students just graduated by the medical colleges of Louisville was, from the Hospital College seventeen, from the Louisville Medical College seventy, and from the University seventy-one.

The number graduated by the medical colleges of Cincinnati was, fifty-one from the Miami Medical College, one hundred and two from the Medical College of Ohio, and thirty-three from the Cincinnati College. In Indianapolis, the College of Physicians and Surgeons graduated forty-one, and the Indiana Medical College twenty-nine.